

## Review of the factors affecting nurses entrepreneurship in selected hospitals of Golestan province

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### ABSTRACT

Considering the importance and the role of entrepreneurship in the health sector and acceptance of entrepreneurship as a development approach in most countries, the need to examine the factors affecting the entrepreneurship of nurses is felt more than ever. This applied research was conducted in cluster sampling in four public hospitals in Golestan province and in the form of 275 questionnaires in 2016. The standard questionnaire consisting of 44 questions was developed based on the five-item Likert scale. The questionnaire's construct validity was confirmed by confirmatory factor analysis and its reliability by Cronbach's alpha. SPSS software was used to analyze the data. Results showed that the mean and the coefficient of each components of risk-taking, internal locus of control, need to be successful, clearness of thought, activism, challenging, flexibility, individual approach and bonus item is respectively 4.33 and 0.88, 5.52 and 0.87, 5.85 and 0.83, 5.59 and 0.88, 4.52 and 0.93, 4.52 and 0.76, 3.65 and 0.78, 4.02 and 0.80, 7.00 and 0.85. There is also a significant relationship between any of the components and the nurses' entrepreneurship ( $p < 0.01$ ). This study showed that the factors of risk-taking, internal locus of control, need to be successful, clearness of thought, activism, challenging, flexibility, individual approach and bonus item affect the nurses' entrepreneurship. Therefore, with proper planning, the policy makers in the health sector and administrators of public hospitals in Iran can lead nurses to become entrepreneurs.

**KEY WORDS:** ENTREPRENEURSHIP, NURSES, HOSPITALS

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## INTRODUCTION

Entrepreneurship is a phenomenon that occurs in different environments and leads to economic growth through innovations that people have created in response to economic opportunities and have created these values for both individuals and their society (A. & Ghazi, 2013).

Entrepreneurship is an important and inexhaustible source in all human societies (Cristian-Aurelian & Petronela Cristina, 2012) Entrepreneurship is a complex, multi-layered and full-side concept that has an interdisciplinary nature and creates several areas in the community affected by itself (Sergey & William S, 2009). The gap between resources and facilities on the one hand and inclusive and diverse needs of human society on the other hand require the human involvement and role-playing. In the meantime, there have been people who did not comply with the general rules of communities so some changes have been created (Remeikiene & Dumciuviene, 2013). The entrepreneurs are the cause of making the dynamics and productivity and increase the value of work and raise the spirit of trying in the community (Naebi, 2011). Entrepreneurial Studies show that the entrepreneurs have special properties (S. G., 2010). As a result, in the past few years, the researchers from all disciplines have found a fondness for entrepreneurship (Tajeddini, 2010). Using the training and development practices, it can be improved the entrepreneurial behaviors, even to the extent that they are applicable to a wide range of job opportunities (Peris Bonet, Rueda Armengot, & Martín, 2011).

Coordination at higher levels of entrepreneurial orientations and market orientations improves the business performance and entrepreneurship in the developing countries (Boso, Story, & Cadogan, 2013).

Like other entrepreneurs, the entrepreneur nurse known as the business owner offers the nursing services with the nature of direct care, education, research, administrative and consulting services. Such nurses may do an independent clinical work, be the owner of a business, such as nursing home care or pharmaceutical company or run a consulting business, such as education or research. The nurse entrepreneurs are the innovators that have the primary motivations for change, modernization of health systems and leadership display. The main characteristics of an entrepreneur are the use of creativity to develop a new idea, improvement of services or the methods of service delivery, development of new products or new ways of using the existing products. By combining these features with the advanced or specialized knowledge and skill, it can be said the entrepreneur nurses are the advanced nurses who produce the products or services and can sell them to foreign sources. Separation of a job in which you are employed, selection

of entrepreneurial path followed by the risk of entrepreneurship, tolerance of ambiguity and facing a variety of obstacles and difficulties need strong incentives. A meta-analysis of 41 articles showed that the entrepreneurial motivations are positively and significantly associated with the entrepreneurial approaches selection and people who have high entrepreneurial incentives are more willing to become entrepreneurs (Jahani & Fallahi, 2014).

Karsoroud also states that the entrepreneurial incentives not only affect the desire to entrepreneurship, but also have an impact on the entrepreneurial behaviors (Carsrud & Brännback, 2011). Perceived entrepreneurial incentives refer to the beliefs of individuals about the attractiveness of an idea for choosing an entrepreneurial career path and the level of attractiveness may be associated with the economic benefits derived from the entrepreneurial activities, the possibility of achieving independence and achieving the specific goals (Solevik, 2013). Studies show that the need for flexible work schedule, ability to follow ideas and having more earnings are the reasons for the tendency of staff in the health professions to entrepreneurship (Jahani & Fallahi, 2014).

Eddie expressed that the creation of consent for use of personal style and creative flair to carry out a task or produce a product, free from the constraints of large organizations, is considered as an important motivation (Eddy & Stellefson, 2009). For the formation of a successful entrepreneurial activity, in addition to proper identification of opportunities, a level of updated knowledge and information as a capital are required (Rabiei & Sarabi, 2014).

So far, much research has been done on the entrepreneurship but in the field of nurses' entrepreneurship in hospitals of Golestan province, no research has taken place. The aim of this study was to investigate the factors influencing the nurses' entrepreneurship in the selected hospitals of Golestan province. In this context, the effective components in the nurses' entrepreneurship have been examined from 9 dimensions including locus of control, need to be successful, individual approach, flexibility, challenging, clearness of thought, bonus item, activism and risk-taking.

## METHOD

This applied research was conducted in a cross-sectional method in 2016 in Golestan. The study population consisted of nurses in selected hospitals in Golestan province that the sample size of 275 nurses were selected in cluster sampling for 10-20 times for SEM sample in four hospitals located in four points of Golestan prov-

Number	275
Chi-square	352,791
Freedom degree	8
The significance level	0,000

	Avg.
Locus of Control	5.52
Need to be successful	5.85
Individual approach	4.02
flexibility	3.65
Challenging	4.52
clearness of thought	5.59
Bonus item	7.00
activism	4.52
Risk-taking	4.33

ince. Data collection was done by the questionnaire. The questionnaire were developed based on the scale of five options in 9 dimensions of risk-taking (contains 9 questions), internal locus of control (12 questions), need to be successful (7 questions), clearness of thought (4 questions), activism (3 questions), challenging (4 questions), flexibility (3 questions), individual approach (5 questions), bonus item (3 questions). After developing the questionnaire, its validity was confirmed through the library studies, internet, obtaining the required information from specialized literature, as well as by collecting the professors, faculty members and experts' opinions.

The questionnaire's reliability was evaluated among the 30 members of the sample. Cronbach's alpha values is over 0.7 (risk-taking 0.88, locus of control 0.91, need to succeed 0.89, clearness of thought 0.90, activism 0.91, challenging 0.89, flexibility 0.90, Individual approach

0.91 and bonus item 0.88) which shows high reliability of the study tool. In addition, an acceptable validity for the questionnaire was created by interviewing with about five respondents about the possible ambiguities and applying their judgment in the final questionnaire. Then, the structural model, was confirmed by the confirmatory factor analysis test. To rank the factors affecting nurses, Friedman test was used. Single-sample t-test was used to test the hypothesis.

### FINDINGS

In this study, we evaluated 275 questionnaires that were completed correctly and completely. Among the respondents to the questionnaire, 66% were female and 34% were male. In terms of work experience, 30% were less than 10 years old, 48% between 11-20 years old and 22% between 21-30 years old. In terms of education, 80 percent had a bachelor, 15 percent a master, 0.05 percent a master and above and in terms of age, 16 percent were under 30 years old, 54 percent between 31- 40 years old, 30% between 41-50 years old.

The results of Friedman test are shown in Table 5. Due to the significant level, it is indicted that the variables of control locus, need to be successful, individual approach, flexibility, challenging, clearness of thought, bonus item, activism, risk-taking have different ranks. According to Table 2, the component of bonus item with an average rating of 00.7 is in the first rank, need to be successful with an average rating of 5.85 is in the second rank, clearness of thought with an average rating of 5.59 is in the third rank, locus of control with an average rating of 5.52 is in the fourth rank, challenging and activism component with an average rating of 4.52 in the fifth rank, risk-taking with an average rating of 4.33 in the sixth rank, individual approach with an average rating of 4.02 in the seventh rank and flexibility with an average rating of 3.65 in the eighth rank.

Component	Sign	Number	Mean	SD	Mean Standard deviation
Locus of Control	LC	275	3.4309	.86324	.05104
Need to be successful	NS	275	3.5125	.72722	.04300
Individual approach	IA	275	3.2056	.67805	.04009
flexibility	F	275	3.0932	.71944	.04254
Challenging	C	275	3.2622	.80939	.04786
clearness of thought	CT	275	3.4808	.69495	.04109
Bonus item	BI	275	3.7587	.61088	.03612
Activism	A	275	3.1830	.64973	.03842
Risk-taking	R	275	3.1935	.85467	.05054

Table 4. t test for factors affecting nurses' entrepreneurship						
Study level = 3						
Component	T	Degree of freedom	The significance level	The mean differences	Approximately confidence interval 95%	
					Lower limit	Upper limit
Locus of Control	8.442	274	.000	.43094	.3305	.5314
Need to be successful	11.918	274	.000	.51249	.4278	.5971
Individual approach	5.128	274	.000	.20559	.1267	.2845
flexibility	2.192	274	.000	.09324	.0095	.1770
Challenging	5.479	274	.000	.26224	.1680	.3564
clearness of thought	11.699	274	.000	.48077	.3999	.5617
Bonus item	21.005	274	.000	.75874	.6876	.8298
Activism	4.763	274	.000	.18298	.1074	.2586
Risk-taking	3.828	274	.000	.19347	.0940	.2929

The results related to descriptive statistics of individual factors are shown in Table 9. Mean and standard deviation of comments for the control locus component are respectively 3.43 and 0.86, for the need to be successful component respectively 3.51 and 0.72, for individual approach component respectively 3.20 and 0.67, for flexibility component respectively 3.09 and 0.71, for challenging component respectively 3.26 and 0.80, for intellectual clearness component respectively 3.48 and 0.69, for bonus item component respectively 3.75 and 0.61, for activism component respectively 3.18 and 0.64 and for balanced risk-taking component respectively 3.19 and 0.58.

Results of t test is given in Table 4. According to the significant level of ( $p < 0/05$ ) and positive values of upper and lower limit, the status of each component of the locus of control, need to be successful, individual approach, flexibility, challenging, clearness of thought, bonus item, activism and balanced risk-taking is desirable.

In table 5, the correlation between the variables in the less than one percent shows a significant relationship.

## DISCUSSION

One of the main objectives of this study was to determine the relationship between the component of a balanced risk-taking and nurses' entrepreneurship. The results showed that there is a significant relationship between the balanced risk-taking component and entrepreneurship ( $r = 0.88$ ). The results obtained by Mohammadi et al (Mohammadi, Talkhabi Alishah, & Lashkari, 2015) showed there is a significant positive correlation between risk-taking and entrepreneurship that are consistent with the results of this study. People who have a spirit of risk-taking and

accept this fact that they themselves are responsible for the result of their actions will make more efforts to become entrepreneurs. In this regard, providing some programs to invite successful entrepreneurs to present their experiences in order to familiarize nurses with the positive and negative realities in the field of entrepreneurship will be useful and valuable.

Other objective of this study was to determine the relationship between the locus of control component and nurses' entrepreneurship. The results showed that there is a significant relationship between the component of the locus of control and entrepreneurship ( $r = 0.87$ ). In line with this study, the results of Arab and Aligoli Firouzjari (Arab & Aligoli Firouzjari, 2015) showed that the internal locus of control has a significant positive impact on the students' entrepreneurial intentions that are consistent with our results.

Another aim of this study was to determine the relationship between the component of need to be successful and nurses' entrepreneurship. The results showed that there is a significant relationship between the component of need to be successful and entrepreneurship ( $r = 0.83$ ). The results of this hypothesis are consistent with the results obtained by Ahmadi et al (Ahmadi, Sha-fei, & Mafakheri Nia, 2013). The results of their studies which are consistent with the results of the present study showed that the individual factors have a significant relationship with the entrepreneurial characteristics, so that a sense of achievement and the need to succeed is more in the male students and those who have good academic standing.

Other objective of this study was to determine the relationship between the component of clearness of thought and nurses' entrepreneurship. The results showed that there is a significant relationship between

Table 5. matrix of correlation between variables

	Locus of control	Need to be successful	Individual approach	flexibility	Challenging	clearness of thought	Bonus item	Activism	Risk-taking	
Locus of control	Correlation coefficient	1								
	Significance level									
	Number	275								
Need to be successful	Correlation coefficient	.755**	1							
	Significance level	.000								
	Number	275	275							
Individual approach	Correlation coefficient	.470**	.476**	1						
	Significance level	.000	.000							
	Number	275	275	275						
flexibility	Correlation coefficient	.500**	.498**	.551**	1					
	Significance level	.000	.000	.000						
	Number	275	275	275	275					
Challenging	Correlation coefficient	.652**	.519**	.590**	.406**	1				
	Significance level	.000	.000	.000	.000					
	Number	275	275	275	275	275				
Clearness of thought	Correlation coefficient	.639**	.643**	.630**	.469**	.667**	1			
	Significance level	.000	.000	.000	.000	.000				
	Number	275	275	275	275	275	275			
Bonus item	Correlation coefficient	.566**	.637**	.518**	.514**	.469**	.587**	1		
	Significance level	.000	.000	.000	.000	.000	.000			
	Number	275	275	275	275	275	275	275		
Activism	Correlation coefficient	.602**	.525**	.641**	.627**	.502**	.582**	.608**	1	
	Significance level	.000	.000	.000	.000	.000	.000	.000		
	Number	275	275	275	275	275	275	275	275	
Risk-taking	Correlation coefficient	.739**	.621**	.633**	.533**	.630**	.562**	.533**	.704**	1
	Significance level	.000	.000	.000	.000	.000	.000	.000	.000	.000
	Number	275	275	275	275	275	275	275	275	275
**. Correlation is significant at the 0.01 level (2-tailed).										

the component of clearness of thought and entrepreneurship ( $r=0.88$ ). In line with this study, Nemati (Nemati, 2014) discussed the students' entrepreneurial personal traits in Tehran state universities. The results showed that there is a significant difference among all students studied in various academic disciplines about having the clearness of thought. These results are consistent with the results of this study.

Other objective of this study was to determine the relationship between the activism component and nurses' entrepreneurship. The results showed that there is a significant relationship between the activism component and entrepreneurship ( $r=0.93$ ). In line with this research, the results of Akbari Pourang and et al's studies (Akbari Bourang, pour, & Ayati, 2015) showed that there is a significant relationship between the entrepreneurial orientation and organizational performance that are consistent with the present studies and do not match the results of Parsa and Graily Sheikh (Parsa & Grayli Sheikh, 2012). Their results showed that the entrepreneurship characteristics are more relevant to the rationalist practices than performance ones. Of course, it was expected that the entrepreneurial characteristics are more relevant to the performance practices. But the result of their study showed that people's entrepreneurial characteristic is more impressed by the rationalist practice. Perhaps the result can be analyzed in a way that people with high entrepreneurial characteristics, regardless of all circumstances and rational decisions, do not invest in a field.

Other objective of this study was to determine the relationship between the challenging component and nurses' entrepreneurship. The results showed that there is a significant relationship between the challenging component and entrepreneurship ( $r=0.76$ ). The results and findings of Nemati (Nemati, 2014) that are inconsistent with the results of this study showed that the challenging component was evaluated in the weak students. In fact, challenging index covers some cases of need to succeed and since the entrepreneurship is challenged, it seeks to achieve the unattainable areas and is interested in areas in which the capabilities of entrepreneurs are challenged. So the entrepreneur will enter the new tasks and will manipulate them and after a while, will dominate the work.

Other purpose of this study was to determine the relationship between the flexibility component and nurses' entrepreneurship. The results showed that there is a significant relationship between the flexibility component and entrepreneurship (0.78). The results obtained by Abbasi et al (Abbasi, Babashahi, Afkhami Ardekani, & Farahani, 2014) showed that there is a significant relationship between the flexibility of human resources and organizational entrepreneurship. In order to achieve the

functional flexibility, it is recommended the organizations to provide the utilization background of different job design techniques, such as job rotation, job development and job enrichment. Moreover, employing the empowerment strategies, human resource development and team-building help the behavioral flexibility of human resources.

Other objective of this study was to determine the relationship between the individual approach component and nurses' entrepreneurship. The results showed that there is a significant relationship between the individual approach component and Entrepreneurship (0.80). The results of this hypothesis are consistent with the studies of Mohseni et al (Mohseni, Mousavi, & Jamali, 2014) who expressed the entrepreneurship education has a significant positive impact on the entrepreneurial attitude and general self-efficacy beliefs of students.

Through the entrepreneurship educations, the values are formed on entrepreneurship and strengthen it and subsequently, they will also gain the beliefs about entrepreneurship and in this way, their entrepreneurial attitude will be strengthened. Therefore, we can say that through the entrepreneurship education, it can be influenced the self-efficacy beliefs and entrepreneurial attitudes and simultaneously with the development of self-efficacy belief, entrepreneurial and general self-efficacy beliefs, the entrepreneurial attitude will be strengthened in people.

Another aim of this study was to determine the relationship between bonus item component and nurses' entrepreneurship. The results showed that there is a significant relationship between the bonus item component and entrepreneurship ( $r = 0.85$ ). In this study, bonus item component has the highest average. In the studies of Banzing and et al (Benzing, Chu, & Kara, 2009), it was found that in low-income countries, income and bonus are an important incentive for the entrepreneurs and earn money and bonus have been one of the main incentives for entrepreneurship. These results are consistent with the results of this study. Therefore, all mentioned components are considered as the incentives for nurses to become entrepreneurs and they can be encouraged in order to become entrepreneurs through meeting the financial needs and rewarding them.

Be sure the bonus system and its structure is seriously considered and investigated. Accordingly, a committee should be composed of experts from many different disciplines and for the purpose of valuation and allocation of bonuses, the ideas are collected and valued by Entrepreneurship Committee. The ideas will be scored in accordance with the standard provided and according to the scale of their influence on the organization as well as the organization's policy priorities and the bonus is allocated to them at the same amount. In this way,

in addition to the allocation of a reasonable bonus, the ideas are organized and also implemented.

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