

## Entrepreneurship Evaluation of Graduates from Physical Education Schools in Iran

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**Abstract:** Introduction: Nowadays, many developed countries are in transition from bureaucratic to entrepreneurial systems. Nurturing and developing entrepreneurial characteristics and capabilities among graduates of physical education lead to the expansion of entrepreneurial culture; this issue is a highly significant and determining factor in employment. Therefore, identifying and training entrepreneurial related characteristics, especially among graduates, is of great importance. The main purpose of this study was to evaluate entrepreneurship among graduates from schools of physical education in Iran. Research Methodology: This descriptive-survey study was of an exploratory type, which was performed as a field study. In this study, the statistical population included all the undergraduate alumni of physical education in 11 schools between 2003 and 2008 academic years which were 4238 people. Using estimated sample size, 200 people were selected as the sample. A standard questionnaire was prepared for this study. Findings: The findings showed that, variables of ambition (self-confidence) and independence were very high, variable of high risk-taking ability was high and variables of leadership, motivation and resistance were below the normal level among the graduates. Discussion and conclusions: As a general concept, entrepreneurship index was slightly more than the average level (2.5) among the graduates of physical education, which demonstrated an average condition of entrepreneurship among graduates of physical education. Hence, in order to improve entrepreneurship among graduates of physical education, it is essential to nurture their personal characteristics.

**Key words:** Entrepreneurship, Graduates of physical education, Entrepreneur graduates

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### INTRODUCTION

Developments and transformations in the current socio-economic system are due to tremendous scientific and technologic progress which, in its own turn, has led to the formation of new viewpoints, requirements and needs. To respond these needs and to be in harmony with the aforementioned developments and transformations, the currently available processes and methods cannot be sufficient. Therefore, assurance and survival of societies require optimal use of active workforce, especially elite and entrepreneur forces (Ahmadpour, 1998).

Sports industry is not an exception; sports are one of the most important and fundamental factors for providing health and happiness in societies, which positively affects national productivity and, consequently, economic prosperity. Sports industry is being transformed in Iran and this mobility can create proper fields for entrepreneurial activities besides sports (Adams, 1997). Considering extensive dimensions of sports industry, it can be regarded among one of the quickest areas of economy, society and politics in the world. There exist achievements and job opportunities in a large number of sport events; in other words, increase in the entrepreneurial processes in sports and events is forming a variety of new job opportunities (Mandalizadeh, 2010). By knowing entrepreneurship fields in sports, many new opportunities can be introduced to entrepreneurs and societies in order to be used as a means of socio-economic development (Adams, 1997). Sports industry prepares the required entrepreneurship fields by creating demands for sport equipment and services and attraction for societies; also, entrepreneurship helps sports to improve through creating and developing sports business in the production of sports equipment. To improve entrepreneurship in the area of sports, effective structural and underlying factors should be identified and, based on different entrepreneurial goals of sports, planning should be done to create effective structures and grounds for developing sports entrepreneurship. In contrast, identifying the factors, determining goals and planning in sports industry are the duties of sports graduates (Mandalizadeh, 2010).

With regard to entrepreneurship, entrepreneur and entrepreneurial organization, many definitions have been introduced by experts, which is an inevitable and normal issue due to the extensive domination of entrepreneurship in different sciences. Entrepreneurship first emerged in economics theories and was considered as the main reason for wealth or economic values; since 15th century, it has been existed in many economic

schools (Ahmadpour, 1998). Jan Stewart chose the term entrepreneurship in 1848. He believed that entrepreneurship included leadership, supervision, control and risk-taking (Farahani, 2007). Rezaein (1991) defined entrepreneurship as the process of seizing opportunities by people, regardless of available resources (Nazari, 2008). Jeffrey Timmons (1997) Rafael, Amite (1993) and Venkatraman (2001) defined entrepreneurship as the generation of a valuable insight from nothing (ibid). Kauffman foundation as the global entrepreneurship watch and an entrepreneurship research consortium (2005) believed that entrepreneurship is the process of creating new businesses (Seifi, 2010). Shumpeter (1934), who is in fact considered as father of entrepreneurship, called entrepreneurship as the driving force of economy (Behrangi, 2005). Eugene Lewis named the successful leaders in the field of governmental management as "public entrepreneurship"; after studying and investigating the lives of successful leaders in governmental areas, he found out that they had entrepreneurial skills (Seifi, 2010). The results of study by Jahangiri and Kalantari (2008) demonstrated that entrepreneurship rate was not related to job experience, gender and organizational position (Jahangiri, 2008).

An organizational entrepreneur is a person who discovers and develops new products, activities or technologies under the support of a company or organization (Seifi, 2010). McClelland (1963) and Sexton (1997) believed that success-seeking, risk-taking, independence and internal control were the characteristics of entrepreneurs (Nazari, 2008). From Karen *et al.*'s viewpoint (2010), the main characteristics of graduates were adaptability, creative thinking, professional knowledge, communicational skills, team working and professional self-efficacy (Nazem *et al.*, 2007). Wang *et al.*, (2011) defined five indices for evaluating entrepreneurship of graduates, which included abilities of leadership, affordability, marketing, profit-making and development (Wang, 2011). Risk-taking, control, success requirement, creativity, endeavor, ambiguity tolerance and competition power were among the characteristics presented by Sadeghi and Estaki (2010) (Sadeghi, 2010). Mandalizadeh defined an entrepreneur as a risk-taking person who buys things with known price and sells them with unknown price also entrepreneurs as the main element of organizational growth and productivity (Mandalizadeh, 2010).

Organizational entrepreneurship is a process in which innovative products, services or processes are revealed in a pre-founded organization by inducing the generation of entrepreneurial culture. In another definition, entrepreneurial activities are those activities which have organizational support and resources to obtain innovative results (Jahangiri, 2008). Zahra (1993) called organizational entrepreneurship as the process of renewing organizational structure and defined two dimensions of "innovation and approach renewal" for that (Seifi, 2010). Also, Lumpkin and Dees (1996) defined independence, creativity, risk-taking, spontaneity and competition as a set of characteristics related to organizational entrepreneurship (Lumpkin, 1996). Based on the idea of Miles (1999) and Seifi, (2010)

creativity is the commonality of in the concepts of organizational entrepreneurship. Therefore, organizational entrepreneurship is the process of improving organization's capabilities to utilize innovative skills and capabilities of the employees (Seifi, 2010). Fry (1993) believed that organizational entrepreneurship happens when the upmost chief executive commits himself/herself to the concept of entrepreneurship; after that, the whole organization accepts the entrepreneurship to generate a live and dynamic structure inside that organization (Farahani, 2007). Steven *et al.* (2011) addressed entrepreneurship as one of growth components for all organizations (Steven, 2011). According to Jens *et al.* (2011), to fulfill organizational entrepreneurship, more attention must be paid to organizational learning, knowledge acquiring and knowledge transfer (Jens, 2011). Lena *et al.* (2011) believed that personal and environmental factors were effective on the entrepreneurship level of the graduates. They also believed that lack of desirable working environment, lack of motivation and goal could be the obstacles of entrepreneurship (Lena, 2010).

In UNESCO World Conference (United Nations Educational, Scientific and Cultural Organization), which was entitled higher education and universities in the 21st century, it was declared that the main role of higher education in the current century is economic growth, especially by means of training experts. Gaehtgens's interpretation (2003), head of the conference on financial affairs of higher education, was as follows: "universities are tied with professions" (Fry, 1993). The results obtained in many countries by Adams (1997), Anderson (1998), Maxwell *et al.* (2000), Noland (2001) and Canton (2001) demonstrated that occupational motivation is the most important incentive for youngsters to enter universities (Kuratko *et al.*, 2001).

In Iran, higher education has rapidly expanded in recent two decades. Increase in the capacities of higher education via establishing universities and higher education centers in all provinces have caused considerable increase in the number of universities' graduates; thus, imbalance has been created between available job opportunities in different economic fields. In other words, lack of demand has caused the emergence of unemployment phenomenon among university graduates (Behrangi, 2009). Nazari Katoli (2008) stated that the largest unemployment challenge of university graduates was the imbalance between educational contents and occupational skills, unfamiliarity of faculty members with practical processes of doing executive affairs related to the students' field of study, unclearness and unpopularity of placement culture and lack of development of alumni associations (Canton, 2001). San'at Khah (2006) believed that lack of a database on the situation of

university graduates was one of the weaknesses in the lack of proper investigation and planning in order to solve unemployment dilemma among this group (Noland, 2001).

Javadian Saraf *et al.* (2009) referred to 70.2% of university students who were worried about their future career and only 45.5% believed that their professors were effective in terms of career advice (Jahangardi, 2003).

Farahani and Bayat (2007) showed that only a few percent of students were satisfied with the employment conditions of the graduates of physical education and felt free in choosing a career; finding a job in future was one of the main concerns of students (Adams, 1997). According to the report of Vice Chancellor of Minister of Affairs, unemployment rate of university graduates in 2011 was twice more than that of normal unemployed people (Sharifzadeh, 2005).

In spite of the alarming situation of unemployment rate among graduates in Iran, sports have a proper and diversified position in terms of creating job and new opportunities for economic activities; by knowing its occupational fields, new opportunities can be introduced to the youth and society in order to achieve socio-economic growth and development.

Forohipour *et al.* (2007) investigated the most important entrepreneurship priorities of sports graduates in Iran. The main findings of this research was the identification of seven main fields for entrepreneurship in sports which included entrepreneurship in the fields of education in sports, sports management and planning, sports services, sports advertisement, public, championship and professional sports, manufacturing and producing sports equipment and cultural affairs (Mandalizadeh, 2010). Mandalizadeh (2010) conducted some studies and stated that the most important obstacles which affect sports entrepreneurship were inefficiency and frequent change of sports managers in Iran (the first rank), lack of meritocracy system in appointing sports managers (the third rank), plurality of politics and their contradictions in Iranian sports management (the 6th rank), inefficiency of traditional management methods in sports (the 10th rank) and lack of any attitude in sports management toward entrepreneurship (the 11th rank).

Researchers have presented numerous lists with regard to personal and behavioral characteristics of entrepreneurs, the most important of which are given below (Nazem, 2007):

1. Need to progress: is the tendency to perform the job at high standard levels for succeeding in competitive situations (McClelland, 1962)

2. Internal control center: successful entrepreneurs believe in themselves and do not attribute success or failure to fate, luck or other similar forces. In their opinion, failure and success are under their control and they hold themselves accountable for their performance (Sanat khah, 2009).

3. Tendency to risk-taking: is to accept moderate risks which can be controlled by personal endeavors. While considering any kind of risks, two elements are important in forming the concept; one is the perception level of the entrepreneur at the beginning of every risky activity and the other is the likelihood of failure in the case of being unsuccessful in that activity (Imani, 2005).

4. Need for independence: This is one of the characteristics, which is emphasized as a very stimulating force. In fact, need for independence is defined by phrases like: "having control over one's own destiny", "doing something for oneself" and "being one's own boss" (Foroghi poor, 2007).

5. Creativity: is the ability to create new ideas; these ideas might lead to new products or services (Javadian, 2009).

6. Ambiguity tolerance: is the ability to accept uncertainties as a part of life, ability to survive with incomplete knowledge about environment and tendency to start an independent activity, regardless of knowing whether the person will succeed or not. It seems that entrepreneurs have a more level of ambiguity tolerance than company managers (Fry, 1993).

The results of Nazem's study (2007) showed that need for progress, industriousness, goal-seeking, competitiveness, self-confidence, locus of internal control and total entrepreneurship scores of graduates had positive correlation with gender, educational level, work experience and field of study (0.009) (Nazem, 2007). Coefficients of work experience, educational level and field of study were statistically significant; 4% of the variance of need to progress and coefficients of gender and educational level explained 5 and 6% of industriousness and goal-seeking, respectively. Results of Owladian's study (2010) demonstrated that, from the entrepreneur graduates' viewpoint, paying attention to goals, education, human resources, risk-taking, progress tendency and personal creativity in entrepreneurship curricula had positive effects (Owladian, 2010). Based on the results obtained from the study by Lena *et al.* (2011), there was a direct relationship between occupational satisfaction and entrepreneurial intentions (Lena, 2011). Tomas (2004) stated ten characteristics of entrepreneurs in the 21<sup>st</sup> century as (Nazari, 2008):

- |   |                 |
|---|-----------------|
| 1. Identifying and using profitable opportunities | 6. Hard working |
| 2. Skill and policy                               | 7. Optimism     |
| 3. Creativity                                     | 8. Innovation   |
| 4. vision   | 9. Risk-taking  |
| 5. Independent thinking                           | 10. Leadership  |

MirGhafuri *et al.* (2008) claimed that cultural barriers were among the most important obstacles in the entrepreneurship of women graduates (Mirghafuri, 2008).

Aiming to investigate the fields of emergence and nurture of entrepreneurship among students, Azizi (2003) demonstrated a significant relationship between variables such as endurance, trust in internal control, need for progress, risk-taking, creativity and innovation on the one hand and independence on the other (Azizi, 2003). Sharifzadeh (2005) investigated four traits of success-seeking, authoritarianism, competitiveness and risk-taking and determined educational needs of students in order to improve their sense of entrepreneurship (Sharifzadeh, 2005). The findings of this study showed a direct relationship between risk-taking and success-seeking. Also, the findings revealed that competitive students enjoyed more risk-taking and authoritarianism. The results of Jahangardi's study (2003) demonstrated that the set of variables of management support, relationship-oriented management, self-confidence, idea admission system, performance evaluation system, ambitiousness and risk-taking, organizational commitment, customer orientation, decentralized system and work culture along with entrepreneurship elements including independence, modification tendency, risk-taking and effective behavior were statistically significant in the generated linear combination (Jahangardi, 2003). Based on the results from the study by Jeffrey *et al.* (2009), there was a direct relationship between organizational support and organizational entrepreneurship (Jeffrey, 2009). Other results showed higher effect of organizational factors relative to environmental factors on the level of entrepreneurship because there was a significant difference between entrepreneurship at different levels of organizational leadership (Karen *et al.*, 2010). Imani (2005) concluded that there was a significantly positive relationship between having formal academic education and entrepreneurial characteristics including personal skills, personal motivation, risk-taking, need for progress and creativity (Imani, 2005). Hada Adel (2000) also found that levels of need for progress, independence, tendency toward creativity, risk-taking and determination were significantly higher among entrepreneurs compared with non- entrepreneurs (Hadad Adel, 2000). Kuratko *et al.* (2001) found that personal traits including risk-taking, independence, success-seeking and goal-orientation and organizational characteristics including management support and giving rewards and opportunities could promote entrepreneurship in organizations (Kuratko, 2001). The investigation by Rastakhiz (2006) indicated higher entrepreneurship level among men compared with women (Rastakhiz, 2006). In terms of age variable, (Akbar-alSadat *et al.*, 2006) showed that there was no significant relationship between age and entrepreneurship variable; however, other studies (Moghimi *et al.*, 2005), this relationship was negative and significant. A significant relationship was found between educational level and marital status (Anderson *et al.*, 1998); this relationship was significant in terms of work experience as well (Canton, 2001). However, the research evidence provided by Akbar-alsadat (2006) demonstrated lack of any significant relationship between work experience and entrepreneurship (Akbar-alSadat, 2006). Behrangi and Tabatabae (2009) obtained no significant relationship between entrepreneurial characteristics and effectiveness of graduates; therefore, in the current situation, the graduates' effectiveness cannot be predicated based on their personal, background and experimental characteristics of entrepreneurship (Behrangi, 2009).

Iranian graduates of physical education are in charge of the affairs related to physical education and sports in the provinces and cities. They are original trustees of sports issues in provinces and counties and have a great influence in this area. Their increased effectiveness leads to the growth and flourishing of sports and, consequently, macro-development of the country's sports. Accordingly, the undeniable effects of entrepreneurship on the improvement of sports organizations' management and development of alumni's associations were analyzed with an entrepreneurial approach. In fact, the main purpose of this study was to evaluate level of entrepreneurship among graduates of physical education in Iran.

#### **Research Methodology:**

A) Research methodology: This research was a descriptive survey. Since no reports have been published for determining entrepreneurship factors among the graduates of physical education, this study was an exploratory research which was performed as a field study.

B) Population, sample and sampling method: Population of this study was 4238 graduates of physical education at BSc level from 11 colleges between 2003-2008. To calculate the sample size, the following formula was used:

(Standard deviation was obtained according to a preliminary sampling with cases.)

$$n = \frac{N * Z^2 \frac{\alpha}{2} * \sigma^2}{\epsilon^2(N - 1) + Z^2 \frac{\alpha}{2} * \sigma^2}$$

$$n = \frac{4238 * (1/96)^2 * .369^2}{.05^2(4237) + (1/96)^2 * .369^2} = 200$$

Considering the formula, the estimation of sample size was obtained as 200 people; therefore, 200 questionnaires were distributed among the graduates of 11 schools using stratified random sampling.

C) Research tools: To perform this experiment, a questionnaire which was prepared by Western Economic Diversification (WD), Canada, was applied. After translating and editing the questionnaire by experienced professors, some of its articles were modified, confirmed, completed and prepared according to the local culture (in a way that the nature of the questionnaire remained unchanged). This questionnaire contained 75 four-option questions in Likert scale (completely correct, relatively correct, relatively incorrect and completely incorrect) which corresponded to the codes 4, 3, 2, 1, respectively.

D) Evaluating validity and reliability of the research tool: in this study, in order to estimate validity of entrepreneurship measurement questionnaire, Cronbach's alpha ( $R_a=0.887$ ) was used. Also, exploratory factor analysis (the most important method of validating the data) was used to determine validity of the data. Exploratory factor analysis identified the main factors by using Principal Component (PC) analysis and Varimax rotation. In this analysis, first, the level of adequacy and appropriateness of the factor analysis model was stated using Kaiser-Meyer-Olkin (KMO) Measure of sampling Adequacy and variance percentage; also, Bartlett's Test of Sphericity was evaluated. In the next level, the factor loads were obtained by imposing the cut-off point of 0.3. After performing factor analysis based on three special value indices, ratio of variance defined by each factor and diagram of special values (steep scree), 6 factors (ambition (self-confidence), independence, stability, motivation, risk-taking and leadership) were extracted for the set of 75 questions in the entrepreneurship questionnaire. To name the factors, Varimax rotation was used. As shown by the results of exploratory factor analysis, the set of 6-fold entrepreneurship factors altogether could measure 57.9 % of entrepreneurship variance. Content validity was modified and confirmed by professors in the field of entrepreneurship management and sports management.

E) Research implementation: distribution of questionnaires was done via E-mail, special courier and attendance of the participant or his/her friends. To ensure receiving complete answers from the participants and to observe the assumption of factor analysis, 220 questionnaires were distributed; however, eventually, only 137 questionnaires were collected, which were fully complete in all terms.

F) Statistical methods: To analyze the data, SPSS<sub>16</sub> statistical software was used. Descriptive statistical methods were used to calculate central indices of the variables (mean, median and mode) and dispersion indices (variance, standard deviation and range); in order to present the results in a better way, tables and diagrams were also utilized. In data analysis and generalization of the results from the sample group to the population from which the samples were extracted, inferential statistical models and techniques were used with respect to the type of research question.

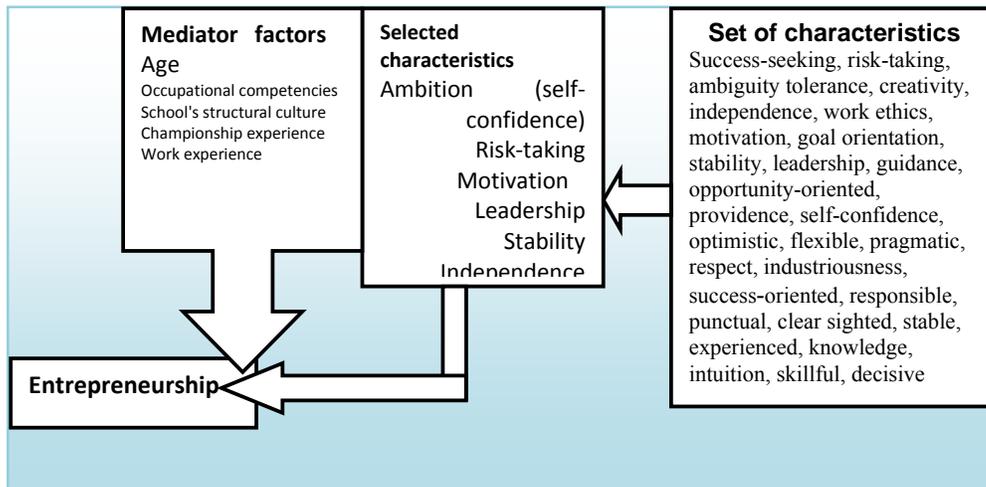


Fig. 1: Conceptual model of the research

**Research Findings:**

A) Descriptive findings: the most important descriptive characteristics of the sample were the frequency distribution of the participants with respect to gender, age, work experience and occupational competencies and championship experience. In this study, 71% of the participants were male and 29% were female. 150 people were holding a BSc degree and 37 MSc and higher degrees. Also, 90.45% of them were within the age range of 25-32 years old and all of them had served the military service. 77% of the graduates had occupational competencies such as coaching certificates, referee certificates and so on and only 23% did not have any coaching and referee certificates. 40% of them were employees of governmental organizations, 82% had championship experience and 18% did not have any championship experience.

**Table 1:** Central and dispersion characteristics of entrepreneurship in terms of general concept and the 6-fold factors

Variable	Mean	Standard Deviation	Skewness	Dependent t	Kurtosis	Dependent t	minimum	maximum	Range
Total entrepreneurship	2/57	0.32	-0.67	-3/37	1/12	2/97	0/95	3	2/05
Ambition	3	0/49	-0/55	-3/11	1/34	3/44	1/12	2/4	3/80
Independence	2/94	0/52	-0/21	-2/03	-0/25	-0/47	1/15	3/95	2/80
Stability	2/11	0/57	-0/05	-0/08	-0/7	-2/32	1	3/74	2/74
Motivation	2/23	-0/53	-0/30	-1/78	-0/26	-0/88	1/25	4	2/75
Risk-taking	2/74	0/58	-0/15	-0/95	-0/23	-0/95	1/20	3/65	2/45
Leadership	2/41	0/59	0/11	0/54	-0/28	-1/03	1	3/48	2/48

As can be seen in Table 3, mean and standard deviation of total entrepreneurship variable among the graduates in the studied sample were 2.57 and 0.32, respectively; thus, standard error was equal to 0.027. Skewness of distribution (-.67) and its dependent t (-3.37) showed that the distribution was completely asymmetrical and inclined to the left side; Kurtosis of distribution (1.12) and its dependent t (2.97) indicated that Kurtosis of distribution was considerably longer than normal distribution. Total entrepreneurship of the participants varied from 0.95 to 3 within the range of 2.05.

The first factor of entrepreneurship was ambition (self-confidence) with the mean and standard deviation of 3 and 0.49, respectively. Its mean standard error was 0.03. Also, skewness of distribution (-0.55) and its dependent t (-3.11) demonstrated that the distribution was completely asymmetrical and inclined to the left side. Kurtosis of distribution (1.34) and its dependent t (3.44) stated that the distribution was considerably longer than normal distribution. Furthermore, scores for the ambition variable varied from 1.12 to 4.2 within the range of 3.08.

The second factor of entrepreneurship was independence with the mean and standard deviation of 2.94 and 0.52, respectively. Its mean standard error was 0.03. Also, skewness of distribution (-0.21) and its dependent t (-2.03) demonstrated that the distribution was completely asymmetrical and inclined to the left side. Kurtosis of distribution (-0.25) and its dependent t (-0.47) stated that the distribution was considerably longer than normal distribution. Furthermore, scores for independence variable varied from 1.15 to 3.95 within the range of 2.80.

The third factor of entrepreneurship was stability with the mean and standard deviation of 2.11 and 0.56, respectively. Its mean standard error was 0.048. Also, skewness of distribution (-0.05) and its dependent t (-0.08) demonstrated that the distribution was approximately symmetrical. Kurtosis of distribution (-0.70) and its dependent t (-2.32) stated that the distribution was considerably shorter than normal distribution. Scores for stability variable also varied from 1 to 3.74 within the range of 2.74.

The fourth factor of entrepreneurship was motivation with the mean and standard deviation of 2.23 and 0.53, respectively. Its mean standard error was 0.045. Also, skewness of distribution (-0.30) and its dependent t (-1.78) demonstrated that the distribution was approximately asymmetrical and inclined to the left side. Kurtosis of distribution (-0.26) and its dependent t (-0.88) stated that the distribution was almost as long as the normal distribution. Scores of motivation variable also varied from 1.25 to 4 within the range of 2.75.

The fifth factor of entrepreneurship was risk-taking with the mean and standard deviation of 2.57 and 0.58, respectively. Its mean standard error was 0.341. Also, skewness of distribution (-0.15) and its dependent t (-0.95) demonstrated that the distribution was approximately symmetrical. Kurtosis of distribution (-0.23) and its dependent t (-0.95) stated that the distribution was almost as long as the normal distribution. Scores of the risk-taking variable also varied from 1.20 to 3.65 within the range of 2.45. And, the last factor of entrepreneurship was leadership with the mean and standard deviation of 2.41 and of 0.59. Its mean standard error was 0.050. Also, skewness of distribution 0.11) and its dependent t (0.45) demonstrated that the distribution was approximately symmetrical. Kurtosis of distribution (-0.28) and its dependent t (-01.03) stated that the distribution was the same in length as the normal distribution. Scores of the leadership variable also varied from 1 to 3.48 within the range of 2.48.

B) Inferential findings

**Table 2:** The results obtained from one-sample t-test to determine level of each variable

Variable	mean	Standard Deviation	T value	Variable level in population
Entrepreneurship (in the general concept)	2/57	0/32	7/54	Above average
Ambition (self-confidence)	3	0/49	15/9	Very high
Independence	2/94	0/52	11/05	Very high
Stability	2/11	0/57	7/12	Below average
Motivation	2/23	0/53	8/11	Below average
Risk-taking	2/74	0/58	9/32	high
Leadership	2/41	0/59	8/18	Below average

As can be observed in the last column of Table 2, variables of ambition (self-confidence) and independence among the population of graduates were very high, variable of risk-taking was high and variables of leadership, motivation and stability were below the average. Entrepreneurship index in its general concept in the population from which the samples were chosen was a little more than the average value (2.5).

**Table 3:** Rating the 6-fold variables of entrepreneurship by Friedman test

Variable	Mean ranking	ranking
Ambition (self-confidence)	4/11	1
Independence	3/76	2
Stability	3	6
Motivation	3/03	5
Risk-taking	3/35	3
Leadership	3/71	4
Significance	Chi- square	
0.000	4540/0375	137

According to Table 3, variable of ambition (self-confidence) had the highest ranking and stability had the lowest one; variables of independence, risk-taking, leadership and motivation were in the second to fifth ranks, respectively.

In order to investigate the relationship between entrepreneurship and graduates' personal characteristics, Chi-square matching test was used. Therefore, it was necessary to convert entrepreneurship variables from distance scale to rating scale. The results of performing this test are summarized in Table 4.

**Table 4:** The results obtained from performing Chi-square test

Variable	School's organizational culture	Occupational competencies	Age	Work experience	Championship experience
Total entrepreneurship	=18/85 Chi-square $\alpha = 0/02$ related	=3/98 Chi-square $\alpha = 0/59$ Not related	=17/87 Chi-square $\alpha = 0/02$ related	=6/16 Chi-square $\alpha = 0/68$ Not related	=13/14 Chi-square $\alpha = 0/22$ Not related
Ambition (self-confidence)	=8/65 Chi-square $\alpha = 0/16$ Not related	=4/01 Chi-square $\alpha = 0/68$ Not related	=19/84 Chi-square $\alpha = 0/02$ related	=7/83 Chi-square $\alpha = 0/47$ Not related	=8/17 Chi-square $\alpha = 0/50$ Not related
Independence	=5/45 Chi-square $\alpha = 0/55$ Not related	=5/51 Chi-square $\alpha = 0/55$ Not related	=12/68 Chi-square $\alpha = 0/14$ Not related	=10/12 Chi-square $\alpha = 0/43$ Not related	=10/97 Chi-square $\alpha = 0/28$ Not related
Stability	=8/40 Chi-square $\alpha = 0/31$ Not related	=6/88 Chi-square $\alpha = 0/22$ Not related	=7/11 Chi-square $\alpha = 0/72$ Not related	=6/14 Chi-square $\alpha = 0/87$ Not related	=5/11 Chi-square $\alpha = 0/78$ Not related
motivation	=8/05 Chi-square $\alpha = 0/29$ Not related	=5/32 Chi-square $\alpha = 0/62$ Not related	=22/26 Chi-square $\alpha = 0/02$ related	=8/83 Chi-square $\alpha = 0/45$ Not related	=12/38 Chi-square $\alpha = 0/13$ Not related
Risk-taking	=5/70 Chi-square $\alpha = 0/45$ Not related	=9/05 Chi-square $\alpha = 0/17$ Not related	=15/53 Chi-square $\alpha = 0/11$ Not related	=12/11 Chi-square $\alpha = 0/21$ Not related	=8/89 Chi-square $\alpha = 0/45$ Not related
leadership	=18/23 Chi-square $\alpha = 0/02$ related	=0/85 Chi-square $\alpha = 0/98$ Not related	=4/43 Chi-square $\alpha = 0/84$ Not related	=19/89 Chi-square $\alpha = 0/02$ related	=18/75 Chi-square $\alpha = 0/02$ related

As can be seen in Table 4, there was a significant relationship between age and entrepreneurship in its general concept, ambition (self-confidence) and motivation, work experience and leadership, championship experience and leadership, organizational culture and total entrepreneurship and leadership. Moreover, other relationships between personal traits and entrepreneurship variables were not significant.

#### ***Discussion and Conclusions:***

Growth and development of entrepreneurship in societies is possible through the support of government and governmental organizations; however, the fact is that governmental organizations can help the effectiveness of entrepreneurship only if they first become entrepreneurs themselves. Therefore, nowadays, governmental organizations need entrepreneur graduates to improve their performance.

According to the obtained results in this study, 6-factor matrix of ambition (self-confidence), independence, stability, motivation, risk-taking and leadership constitutes the simple structure of entrepreneurship for the graduates of physical education. Nazem (2007) claimed that need for progress, industriousness, goal-orientation, comparativeness and ambition constitute entrepreneurship structure for the graduates from Islamic Azad University (Nazem, 2007). Jahangiri and Kalantari (2008) believed that characteristics like flexibility, industriousness, pragmatism, risk-taking, ambition and introspection were integral elements in the personality of entrepreneurs (8). Palmer (2008), Rasal (2006), and Anula (2003) stated that providence, ambiguity tolerance, risk-taking, ambition, optimism, self-esteem and creativity were among the characteristics of entrepreneur graduates (Nazari, 2008).

Based on the obtained results in this study, the graduates of each level of entrepreneurship had the following conditions: at a very high level relative to variables of ambition (self-confidence) and independence, at a high level relative to the variable of risk-taking and at a below the average level for the variables of leadership, motivation and stability. Entrepreneurship index in its general concept in the population from which the participants were extracted was a little higher (2.58) than the average value (2.5). This result was in agreement with the results of Azadi (2005), Azizian (2006) and Jahangiri and Kalantari (2008) (Jahangiri, 2008).

Finally, it can be concluded that the mean scores of entrepreneurship variable in its general concept in the population from which the participants were chosen was above the average, which indicated an average condition for entrepreneurship; however, this did not mean that they demonstrated entrepreneurial behavior; this meant that the graduates had potential entrepreneurial capabilities and capacities. This issue clarifies the importance of the point that knowing the level of entrepreneurship among graduates and recognizing their potential capabilities and skills and their improvement can provide a feedback from the entrepreneurship activities for governmental organizations. Knowing entrepreneur graduates along with being aware of their entrepreneurial characteristics can provide valuable information for responding to the needs of governmental organizations in terms of selecting and appointing entrepreneur graduates for positions and careers which require innovation and creativity.

General results of this paper showed that entrepreneurship is not directly or inversely related to personal traits of the graduates and these two factors are independent from each other in most variables. Only, personality and psychological characteristics of graduates can have an effective role in the entrepreneurship of a manager. This result was in agreement with the results of Jahangiri and Kalantari (2008), Azadi (2005), Azizian (2006), Behrangi (2009), Moghimi (2005), Dargahi (2006) and Rabin (2001) (Moghimi *et al* , 2005). Of course, this result was not in agreement with the results of Ahmadpour Dariani (1998), Hadad Adel (2000), Louise (1984), Wang (1990) (Ahmadpour *et al* ,1998). Rastakhiz in 2006 claimed a direct relationship between personal traits and level of entrepreneurship (10). Results from the study by Hada Adel (2000) demonstrated no significant relationship between lower age and entrepreneurship level; however, there was a significant relationship between education and entrepreneurship level (Hadad Adel, 2000). The results obtained from the study by Nazem (2007) showed that need for progress, industriousness, goal-orientation, competitiveness, self-confidence, locus of internal control and total entrepreneurship scores had positive correlation with gender, educational level, work experience and field of study (0.009) (Nazem, 2007). In terms of age variable, (Maxwell *et al*, 2000) indicated that the relationship between age and entrepreneurship level was not significant; but some other studies found a negative and significant relationship between them (Anderson, 1998). This relationship was significant for work experience (Canton, 2001). However, study of Akbbar-alSadat (2006) showed no significant relationship between work experience and entrepreneurship level (Akbar-alSadat, 2006).

After identifying constructive elements of entrepreneurship, these elements were ranked. The conclusion of this ranking stated that graduates of physical education had a high level of ambition (self-confidence); independence factor as the elements which provides independent decision-making ability was ranked second and risk-taking was ranked third. However, closer examination of each entrepreneurship characteristics provided valuable information. Scores of variables of motivation, stability and leadership among graduates of physical education were lower than the theoretic mean value (2.5). Improvement of these characteristics requires some modifications in the behaviors of graduates. For instance, 61% of the participants found it "difficult to change a made decision", which is in contrast to motivation, stability and leadership of an entrepreneur. Independence

characteristic also needs a lot of modification in the behaviors of graduates. Dependence on others' cooperation in performing tasks and following the issued orders are among anti-entrepreneurship behaviors. In fact, these behaviors indicate that, due to different reasons like bureaucracy culture, which dominates organizations, graduates are raised to be dependent on others. Improving the spirit of independence among graduates in order to do their assigned tasks is among the measures for strengthening spirit of independence in the occupational field. Risk-taking characteristic was also relatively high among the graduates. Encouraging the graduates to choose difficult goals and to disregard job security are among the behavioral measures for improving the risk-taking behavior. As far as total entrepreneurship characteristics are concerned, fundamental modifications can be made in graduates' behaviors and ideation and innovative thinking can be taught for them. Finally, the most important point that can be extracted from the analysis of the results of this study is that, because the graduates have higher levels of ambition and a kind of self-confidence, their leadership, adaptability and motivational mentalities can be improved by teaching entrepreneurship, especially behavioral educations. It is evident that the aim of entrepreneurship education must be transfer of knowledge and creation of competency among graduates. Eventually, these educations must generate entrepreneurial insights among them. Finally, considering the results of this study and the role of graduates' entrepreneurship in improving organizational performance, it is crucial that their entrepreneurship level be measured for selection and appointment of graduates; thus, to improve the efficiency of sports organizations, those graduates with an acceptable level of entrepreneurship should be used.

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