




A Model for Organizational Entrepreneurship with Entrepreneurial Personality Traits Approach of District 1 Iran Teaching Hospitals

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Abstract

Background: Having the individual characteristics of entrepreneurial employees in organizations is a unique asset that enables the organization to move towards entrepreneurship by using these capabilities more easily and with less investment and spending less time selecting and training employees.

Objectives: The purpose of this study was to determine the relationship between entrepreneurial personality traits and entrepreneurship in district 1 Iran teaching hospitals.

Methods: This cross-sectional study was performed on 946 staff of hospitals of medical sciences universities using census method in 2020. The instruments of measurement were standard enterprise entrepreneurship questionnaire and entrepreneurial personality traits questionnaire. Data were analyzed using the Pearson correlation coefficient and structural equation modeling using Smart PLS2 software.

Results: The results showed a significant direct relationship between risk-taking and organizational entrepreneurship ($r = 0.62$). Also, there was a relationship between the component of internal locus of control with organizational entrepreneurship ($r = 0.71$), between the achievement component with organizational entrepreneurship ($r = 0.68$), and between personality traits of entrepreneurs with organizational entrepreneurship ($r = 0.68$) ($P \leq 0.05$).

Conclusions: Regarding the direct relationship between entrepreneurial personality traits and entrepreneurship, it seems that entrepreneurship will be improved and vice versa if identified and supported by entrepreneurial personality traits. Thus, making decisions that affect both of these variables will improve organizational entrepreneurship and achieve a healthy and entrepreneurial organization.

Keywords: Entrepreneurship, Personality Traits, Hospital, Internal Locus of Control, Risk-Taking, Achievement

1. Background

In today's competitive environment, where organizations are faced with issues such as rapid technological change, complex competition, rapid growth of new competitors, a variety of customer needs and demands, and the overall desire to increase efficiency and productivity, a business can have the power to compete, which, in addition to being innovative and entrepreneurial, is more pioneering than competitors in identifying entrepreneurial opportunities (1). At present, given that entrepreneurs play a vital role in the economic growth and prosperity of the organization, it is necessary to promote entrepreneurship and its culture in organizations (2). Over time, studies examined the role of personality in predicting en-

trepreneurial performance and the traits that distinguish entrepreneurs from non-entrepreneurs (3).

Entrepreneurs in competitive environments cause the economic growth of societies through entrepreneurship (4). The fact is that entrepreneurship is a function of innovation in organizations (5). Among the most important characteristics that have been mentioned for entrepreneurs, we can mention risk-taking, success, ambiguity tolerance, internal source of control, innovation, independence, foresight, determination and opportunism, and perseverance (6-11). Opportunities cannot be exploited until they are recognized (12). Opportunities are available in the environment and are waiting to be discovered by entrepreneurs (13).

Entrepreneurs are those who, in the absence of resources, not only reduce their activities but also get more incentives to do so (14). These people gather a great deal of information to take advantage of opportunities compared to ordinary people. This has a lot to do with their success. Research has also shown that entrepreneurs are motivated intuitively (based on knowledge, expertise, and risk) and send positive signals to the information they receive, then the entrepreneurial action occurs (15). Entrepreneurial personality traits within an organization's employees are one of the most valuable resources that enable organizations to strengthen entrepreneurship by using this privilege easily and at a lower cost and by training employees. To achieve this goal, employees should be motivated, and innovation should be supported (16).

Nowiński and Haddoud conducted a study with the aim of achieving entrepreneurial models in decision-making. Their research showed the impact of entrepreneurial attitudes and entrepreneurial self-efficacy on the students of business, engineering, and basic sciences at a Polish University (17). Binti Abd Rani, in a study concluded that psychological factors such as social support, job training, and counseling have a positive impact on entrepreneurship success among graduates (18). Despite the importance of entrepreneurship, our organizations, including hospitals, have not separated their priorities. Innovation has been examined cross-sectionally and case by case.

2. Objectives

This study was conducted with the aim of determining the relationship between the personality traits of entrepreneurs and organizational entrepreneurship by presenting an entrepreneurial model with the approach of personality traits of entrepreneurs in Iranian hospitals in 2019.

3. Methods

The current research was conducted with the aim of providing an entrepreneurial model with the approach of employees' personality traits. This research is practical in terms of its purpose and nature. Based on how to obtain the required data, it can be considered a descriptive research. Considering that it examines the relationship between two variables, it is a correlational type that was conducted cross-sectionally in 2020. It should be noted that in this research, the variable of personality characteristics is the independent variable, and the entrepreneurship variable is the dependent variable. The research population of 946 people included all managers and nurses of

district 1 teaching hospitals, including hospitals in Mazandaran, Golestan, Semnan, Shahroud, Gilan, and Babol, and was selected by census sampling. Seventeen hospitals were selected and randomly clustered. The ethical considerations of this research were as follows: Obtaining permission from the hospital management to distribute the questionnaire, observing honesty and scientific trust, conducting the research without specific bias and maintaining impartiality, completing the questionnaire with the full consent of the respondents, explaining the questionnaire to the participants and obtaining informed consent and confidentiality of the questionnaires and obtaining the code of medical ethics from University.

Data collection tools were standard questionnaires of entrepreneurial personality characteristics, which were designed with 13 questions in three dimensions of risk-taking, internal locus of control, and achievement (19). Moreover, Marguerite Hill's standard organizational entrepreneurship questionnaire is considered on a Likert scale with a range of (1-5) for six components with 32 questions, including entrepreneurial culture, organizational verbs, reward, leadership, flexibility, and individual attitude (20). Since the Cronbach's alpha coefficient obtained for all research variables is above 0.7, it can be said that the questionnaire had acceptable reliability. The Cronbach's alpha coefficient was 0.90 for the personality characteristics questionnaire and 0.86 for the organizational entrepreneurship questionnaire. Modeling of structural equations was done using Smart PLS2 software. This research was taken from the doctoral dissertation, a part of which is published in the article (21).

4. Results

In this research, 946 people participated, of which 31% were men, and 69% were women. In terms of education, most people had a bachelor's degree (61%), and only (12%) had a Ph.D. and professional doctorate. The relationship between the independent variable of the personality characteristics of the entrepreneur in the three components of the locus of internal control, success, and risk-taking with the dependent variable of organizational entrepreneurship was measured using Pearson's correlation coefficient test ($P \leq 0.05$). The results of Table 1 showed that there is a relationship between the components of internal control source ($r = 71\%$) and organizational entrepreneurship, between the component of risk-taking ($r = 62\%$) and entrepreneurship, and between success and organizational entrepreneurship ($r = 68\%$).

The results, according to the obtained values (Table 2), show that People's responses to the impact of the three

Table 1. Correlation Coefficients Between the Three Components of Entrepreneurial Personality Traits (N = 946)

Variables	Risk-Taking	Internal Locus of Control	Achievement	Personality Traits
Intrapreneurship	r = 0.62	r = 0.71	r = 0.68	r = 0.68

Table 2. Rankings of Variables Affecting Entrepreneurship

Variables	Rank	Mean Rank
Achievement	1	2.60
Personality traits	2	2.53
Internal locus of control	3	2.44
Risk-taking	4	2.44

Table 3. Composite reliability and Mean extraction variance for the research variables

Variables	AVE	Composite Reliability	R Square	Cronbach Alpha	Communality	Redundancy
Achievement	0.70	0.92	1.00	0.88	0.70	0.70
Attitude	0.92	0.99	1.00	0.98	0.92	0.92
Control	0.82	0.95	0.99	0.92	0.82	0.82
Entrepreneurial culture	0.92	0.99	1.00	0.99	0.92	0.92
Entrepreneurial leadership	0.92	0.98	1.00	0.97	0.92	0.92
Flexibility	0.93	0.98	1.00	0.98	0.93	0.92
Intrapreneurship	0.92	1.00	0.57	1.00	0.92	0.53
Organizational verbs	0.92	0.99	1.00	0.98	0.92	0.92
Personality	0.71	0.97	0.00	0.96	0.00	0.00
Reward	0.93	0.98	1.00	0.98	0.92	0.92
Risk-taking	0.63	0.87	0.98	0.80	0.61	0.61

components of personality characteristics have been different, and the component of success has gained the most points.

To confirm the convergent validity, factor loadings were higher than 0.7. To determine the reliability of each construct, Cronbach's alpha criterion and composite criterion (CR) were used. To determine the divergent validity in this research, the transverse load test and the Fornell-Larcker test (22) were used ($CR > AVE$), which were performed before the implementation of the structural model (inter-model) and were confirmed. Therefore, the structural model presented in the research was done using the PLS method. The revised structural model of the research is shown in Table 3. In order to evaluate the quality of the model for the hidden variables, the communality index was used. The positive values of this index indicate the quality of the hidden variables measurement model.

T-values and Z-coefficients are used to show the accuracy of the relationship between the constructs. Therefore, if the t-value is greater than 1.96, it indicates the significance of the paths and the appropriateness of the struc-

tural model of the research. The values of t in Figure 1 for evaluating the structural model show that they are all more than (1.96). R² determination coefficients are used to check the fit of the structural model and the endogenous (dependent) variables of the model. The values of 0.19, 0.33, and 0.67 have been introduced as weak, medium, and high model criteria (23). The values in Table 3 and Figure 2 on the lines, the path coefficient, and the relationship between the present variables confirm the appropriateness of the structural model. The value of R² for the organizational entrepreneurship variable was 0.75, for the risk-taking variable was 0.97, and for the source of internal control and the success, dimension was 0.99. According to these values, the appropriateness criterion of the structural model is confirmed.

In the PLS method, by analyzing the data and examining the fit of the measurement and structural models, using the Z coefficients of the paths (T-value) and the standardized factor loadings of the paths, the research hypotheses were tested. (Figure 1). Since the required T-value of each path was higher than 1.96, the predicted paths are

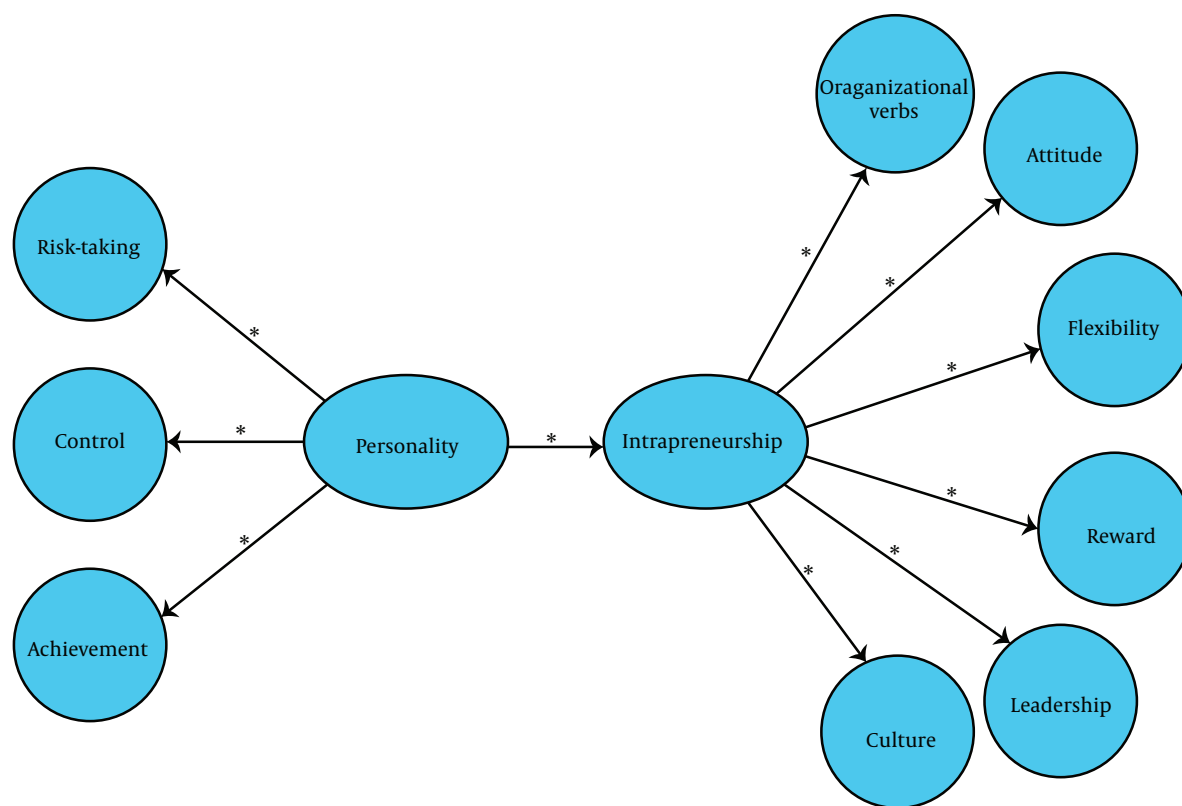


Figure 1. T-values for the structural part of the research model (* ≥ 1.96)

significant at the confidence level of 95%; therefore, the relevance of the present study is confirmed (21).

5. Discussion

Based on the findings of this study, a significant relationship was confirmed between organizational entrepreneurship and managers' personality traits in teaching hospitals ($P \leq 0.05$). Few studies have been done on organizational entrepreneurship, while its importance cannot be ignored in a competitive environment. There are numerous and interconnected reasons and necessities for entrepreneurship development across organizations. The main reasons for the importance of entrepreneurship are the presence of competitors in the markets and the competitive environment, and technological changes. There is much consensus that human capital and organizational entrepreneurs are more influential than ever on growth, organizational survival, and enhancing innovative organizational behaviors (24). They are also recognized as one of

the key factors that influence the success of an organization and the recognition of entrepreneurial opportunities (25).

The results of this research represent a positive and significant correlation between personality traits in risk-taking, internal locus of control, and achievement with organizational entrepreneurship. This study, with a new look at entrepreneurship and its importance in hospitals, has considered its relationship with personality traits in hospitals as a healthcare provider. The results indicate that organizational entrepreneurship is compatible with many organizational variables, including entrepreneurial personality traits. This study confirmed a significant relationship between organizational entrepreneurship and managers' personality traits in teaching hospitals. This finding is supported by many researchers, such as Birdthistle and Nabi (26), Schwarz et al. (27), Frank et al. (28), Smith et al. (29), and López-Núñez et al. (30). However, scholars such as Kessler have been doubtful (31). The results showed a significant relationship between the components of person-

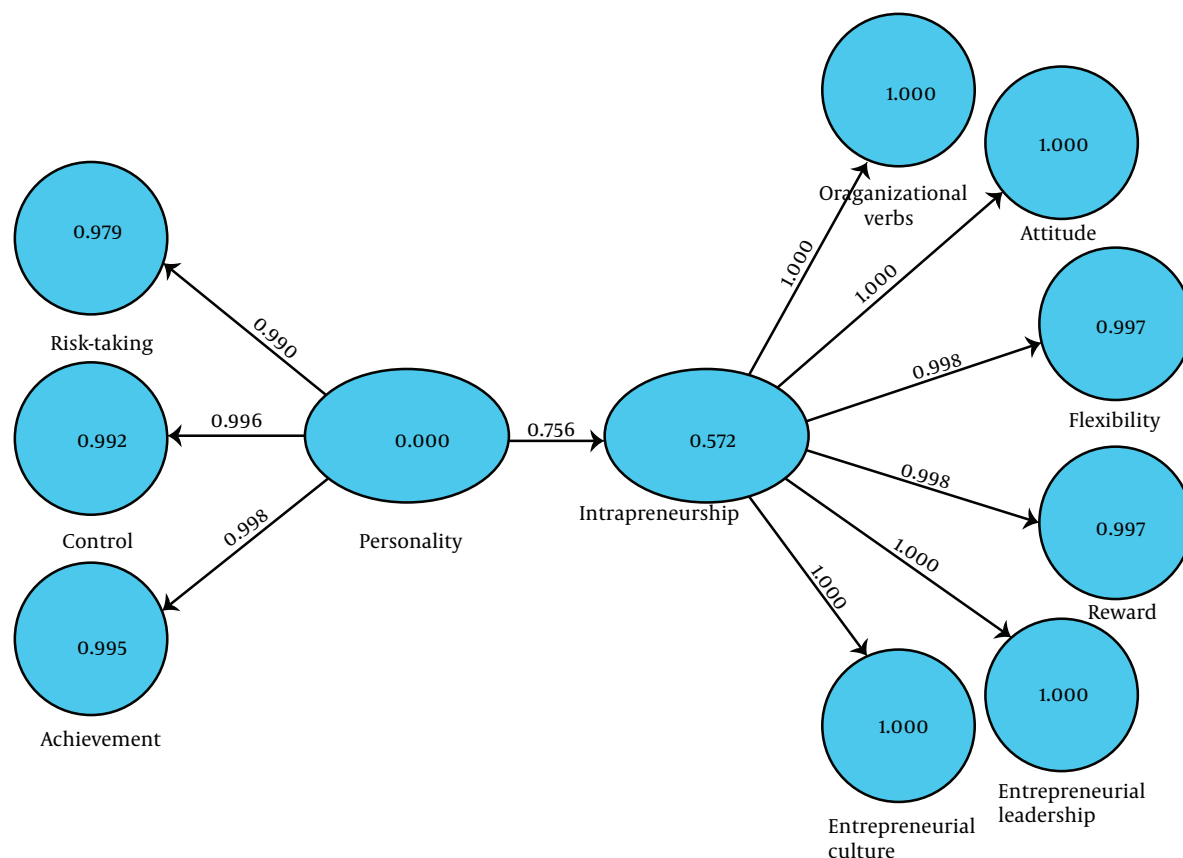


Figure 2. Path coefficient, R² factor load values

ality traits and organizational entrepreneurship in teaching hospitals.

Howard examined the impact of developing entrepreneurial abilities on student entrepreneurship and concluded that there was a direct relationship between these abilities and the entrepreneurial ability of individuals (32). The results of Smith's research are consistent with the results of this study (33). On the other hand, the results showed a significant relationship between the components of the internal locus of control and organizational entrepreneurship in educational hospitals. In this regard, the Karabulut (34) and Leutner et al. (35) studies in describing the characteristics related to entrepreneurial intention are in line with the results of this study.

5.1. Conclusions

Considering the wide range of activities that are carried out in the health sector and include various sectors such as health equipment, electronic health software, new technologies such as bio and nano, and also

in the service sector, including services such as hospital services, public health, mental health, medical care, diagnostic and laboratory services, and other such issues, there will be a great potential for entrepreneurial activities. According to the results obtained from the personality characteristics of the employees, it is suggested that managers strengthen achievement, risk-taking, and uncertainty tolerance among employees with appropriate programs. Therefore, hospital managers should identify creative people and use more resources, reward systems, and training to motivate them to strengthen entrepreneurship.

Footnotes

Authors' Contribution: All authors contributed to the conceptualization and design of the study. All authors contributed to the interpretation of data.

Conflict of Interests: The authors declare no conflict of interest.

Ethical Approval: The study protocol was approved by the Ethical Committee of the Islamic Azad University of Sari Branch, code: [IR.JAU.CHALUS.REC.1397.3](https://doi.org/10.1016/j.jbusres.2018.11.005).

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References

- Katsikea E, Theodosiou M, Perdiki N, Kehagias J. The effects of organizational structure and job characteristics on export sales managers' job satisfaction and organizational commitment. *J World Bus.* 2011;**46**(2):221–33. <https://doi.org/10.1016/j.jwb.2010.11.003>.
- Ardechvili A, Cardozo R, Ray S. A theory of entrepreneurial opportunity identification and development. *J Bus Ventur.* 2003;**18**(1):105–23. [https://doi.org/10.1016/s0883-9026\(01\)00068-4](https://doi.org/10.1016/s0883-9026(01)00068-4).
- McCrae RR, Costa PT. The five-factor theory of personality. In O. P. John, R.W. Robins. *Handbook of personality: Theory and research*. 3rd ed. NY: Guilford Press; 2008. p. 181–59.
- Shepherd DA, Covin JG, Kuratko DF. Project failure from corporate entrepreneurship: Managing the grief process. *J Bus Ventur.* 2009;**24**(6):588–600. <https://doi.org/10.1016/j.jbusvent.2008.01.009>.
- Prokopenko J, Pavlin I. *Entrepreneurship development in public enterprises*. 29. Internat labour organ; 1991.
- Kuratko DF, Hodgetts RM. *Entrepreneurship: a contemporary approach*: Harcourt College Publishers. Fort Worth. 2001;**468**.
- Mueller SL, Thomas AS. Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. *J Bus Ventur.* 2001;**16**(1):51–75. [https://doi.org/10.1016/s0883-9026\(99\)00039-7](https://doi.org/10.1016/s0883-9026(99)00039-7).
- Lee SM, Peterson SJ. Culture, entrepreneurial orientation, and global competitiveness. *J World Bus.* 2000;**35**(4):401–16. [https://doi.org/10.1016/s1090-9516\(00\)00045-6](https://doi.org/10.1016/s1090-9516(00)00045-6).
- Shane S, Locke EA, Collins CJ. Entrepreneurial motivation. *Hum Resour Manag Rev.* 2003;**13**(2):257–79. [https://doi.org/10.1016/s1053-4822\(03\)00017-2](https://doi.org/10.1016/s1053-4822(03)00017-2).
- Cunningham JB, Lischeram J. Defining entrepreneurship. *J Small Bus Manag.* 1991;**29**.
- Hisrich B, Peters M. *Entrepreneurship*. New York: publishing company limited, Tata MC raw graw- hill; 2002.
- Mainela T, Puhakka V. Organising new business in a turbulent context: Opportunity discovery and effectuation for IJV development in transition markets. *J Int Entrepreneurship.* 2008;**7**(2):111–34. <https://doi.org/10.1007/s10843-008-0034-6>.
- Pacheco DF, Dean TJ, Payne DS. Escaping the green prison: Entrepreneurship and the creation of opportunities for sustainable development. *J Bus Ventur.* 2010;**25**(5):464–80. <https://doi.org/10.1016/j.jbusvent.2009.07.006>.
- Fang N, Yuli Z, Hongzhi X. Acquisition of resources, formal organization and entrepreneurial orientation of new ventures. *J Chin Entrep.* 2008;**1**(1):40–52. <https://doi.org/10.1108/17561390910916877>.
- Pech RJ, Cameron A. An entrepreneurial decision process model describing opportunity recognition. *Eur J Innov.* 2006;**9**(1):61–78. <https://doi.org/10.1108/14601060610640023>.
- Wee-Liang T, Teck-Meng T. The Antecedents of Value Creation in Singapore Corporations. Singapore Management University. Toward a theory of public entrepreneurship. *Eur Manag Rev.* 2002;**7**(1):15–1.
- Nowiński W, Haddoud MY. The role of inspiring role models in enhancing entrepreneurial intention. *J Bus Res.* 2019;**96**:183–93. <https://doi.org/10.1016/j.jbusres.2018.11.005>.
- Binti Abd Rani SH. The Influence of Psychosocial Factors on Entrepreneurial Quality among Graduate Entrepreneurs. *Procedia - Soc Behav Sci.* 2016;**219**:620–6. <https://doi.org/10.1016/j.sbspro.2016.05.042>.
- Kordenaiei A, Ahmadpoordariani M, SH S. Designing of Organizational Structure for Entrepreneurship Centers in Iran. *Hum Sci Quarterly Modarres.* 2005;**9**(2):154–19. Persian.
- Hill ME. *The development of an instrument to measure intrapreneurship: Entrepreneurship within the corporate setting [master's thesis]*. Grahams Town: Department of Psychology, Rhodes University; 2003.
- Kalamaki FR, Mahmoudi G, Charati JY. A Model for Organizational Entrepreneurship with Organizational Culture Approach in Iran's Teaching Hospitals. *Ethiop J Health Sci.* 2021;**31**(2):419–28. [PubMed ID: 34158794]. [PubMed Central ID: PMC8188084]. <https://doi.org/10.4314/ejhs.v31i2.25>.
- Fornell C, Larcker DF. Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *J Mark Res.* 1981;**18**(1):39–50. <https://doi.org/10.1177/002224378101800104>.
- Chin WW. The partial least squares approach to structural equation modeling. *Modern methods bus res.* 1998;**29**(2):295–336.
- Alpkan L, Bulut C, Gunday G, Ulusoy G, Kilic K. Organizational support for intrapreneurship and its interaction with human capital to enhance innovative performance. *Manag Decision.* 2010;**48**(5):732–55. <https://doi.org/10.1108/00251741011043902>.
- Puhakka V. Versatile and flexible use of intellectual capital in entrepreneurial opportunity discovery. *J Manag Res.* 2009;**2**(1). <https://doi.org/10.5296/jmr.v2i1.144>.
- Birdthistle N, Nabi G. An examination of tertiary students' desire to found an enterprise. *Educ Train.* 2008;**50**(7):552–67. <https://doi.org/10.1108/00400910810909027>.
- Schwarz EJ, Wdowiak MA, Almer-Jarz DA, Breitenacker RJ. The effects of attitudes and perceived environment conditions on students' entrepreneurial intent. *Educ Train.* 2009;**51**(4):272–91. <https://doi.org/10.1108/00400910910964566>.
- Frank H, Lueger M, Korunka C. The significance of personality in business start-up intentions, start-up realization and business success. *Entrepreneurship Reg Dev.* 2007;**19**(3):227–51. <https://doi.org/10.1080/08985620701218387>.
- Smith K, Matlay H, Beasley M. Graduate entrepreneurs: intentions, barriers and solutions. *Educ Train.* 2011;**53**(8/9):722–40. <https://doi.org/10.1108/00400911111185044>.
- López-Núñez MI, Rubio-Valdehita S, Aparicio-García ME, Díaz-Ramiro EM. Are entrepreneurs born or made? The influence of personality. *Pers Individ Differ.* 2020;**154**. <https://doi.org/10.1016/j.paid.2019.109699>.
- Kessler A. Success factors for new businesses in Austria and the Czech Republic. *Entrepreneurship Reg Dev.* 2007;**19**(5):381–403. <https://doi.org/10.1080/08985620701439959>.
- Howard S. *Developing entrepreneurial potential in youth: The effects of entrepreneurial education and venture creation*. 2004. 14 p.
- Kelley DJ, Baumer BS, Brush C, Greene PG, Mahdavi M, Majbourni M, et al. *Global Entrepreneurship Monitor (GEM): Women's Entrepreneurship 2016/2017 Report*. Boston, MA: The Fenway Group; 2017.
- Karabulut AT. Personality Traits on Entrepreneurial Intention. *Procedia Soc Behav Sci.* 2016;**229**:12–21. <https://doi.org/10.1016/j.sbspro.2016.07.109>.
- Leutner F, Ahmetoglu G, Akhtar R, Chamorro-Premuzic T. The relationship between the entrepreneurial personality and the Big Five personality traits. *Pers Individ Differ.* 2014;**63**:58–63. <https://doi.org/10.1016/j.paid.2014.01.042>.