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The Relationship between Intelligence Beliefs, Self-Esteem, and Achievement Motivation and Entrepreneurial Ability in Students of Shiraz University Agricultural College

¹Hamze Ali Sabri, ²Mohamad ali Amian pour, ³Alireza Pirouzpour, ⁴Ali Ghorbani

^{1, 2, 3&4}Department of Public Administration, Dehaghan Branch, Islamic Azad University, Esfahan, Iran PO BOX 86415-111

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ABSTRACT

Background: Entrepreneurship and its associated concepts can be regarded as an interdisciplinary issue since it is the subject of interest by various fields including psychology, sociology and economy **Objective:** The purpose of the present study was to investigate the relationship between intelligence beliefs, self-esteem, and achievement motivation and entrepreneurial abilities in the students of Agricultural College of Shiraz University. **Method:** The sample consisted of 148 students. Samples were selected using the random stratified method. The instruments included a questionnaire with 70 questions to measure entrepreneurial ability, a questionnaire with 10 questions to measure intelligence beliefs, a questionnaire with 55 questions to measure self-esteem, and a questionnaire with 40 questions to measure achievement motivation. Data were analyzed using the mean and SD of the variables, drawing graphs, the Spearman correlation coefficient, and regression with repeated measures. **Results:** The findings demonstrated that the correlations between intelligence beliefs, self-esteem, and achievement motivation and entrepreneurial ability for all subjects were significant, and for male and female respondents, the correlation between the predicting variables and criteria was significant, the results of the regression analyses regarding the prediction of entrepreneurial ability from achievement motivation, intelligence beliefs, and self-esteem show that for all subjects, as well as male and female classifications, they were significant at 0.05. In the regression analysis, intelligence beliefs were proved to be of higher predicting ability. Research suggestions are provided at the end of this paper.

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INTRODUCTION

Entrepreneurship and its associated concepts can be regarded as an interdisciplinary issue since it is the subject of interest by various fields including psychology, sociology and economy. It shows that entrepreneurship is a wide-ranging and complicated concept which has raised considerable interest.

Entrepreneurship was first defined by Cantillon (circa 1700) (Kilby, 1971), bhu Schumpeter (1934) attributes the general sense of the word in economics to Mill (1848). In his dissertation, Mill discussed political economy. Following Mill, Schumpeter (1934) regarded entrepreneurship from a different perspective.

Intelligence beliefs are also of high importance as a motivational concept (Dai., 1998). Mccleland (1961) performed a thorough and extensive investigation of the relationship between personality traits and growth in career; and he found that progress is not limited to a certain group or religion. Rather, progress can be achieved by growing certain features in individuals.

Entrepreneurs have been interesting subjects of study as the factors accelerating development in developing countries and sustaining development in industrial countries. Now that the Iranian economy is facing various challenges including brain drain, reduced state investments, and lack of economic growth, training entrepreneurs is of essential importance (Ahmad Poordariani, 2000). Entrepreneurship does not only involve a new small business; rather, it means creating value, developing a new market, and providing new products or services to new customers. Entrepreneurship is the process of innovation and the creation of a new business under risky conditions through identifying risks and managing resources allocation. it requires a risk-taking ability as well as the ability to function under ambiguous conditions (Davari, 2003).

Corresponding Author: Hamze Ali Sabri, Department of Public Administration, Dehaghan Branch, Islamic Azad University, Esfahan, Iran.
E-mail: farbeh25@gmail.com PO BOX 86415-111

McClelland and Winter (1971) associated achievement motivation with establishing new businesses and decided that teaching achievement motivation greatly affects the performance of entrepreneurs (Poor Dariani, 2001).

Traits such as independence and self-reliance can be developed in children by providing families and parents with specialized training courses. A number of studies have demonstrated that independence and the sense of responsibility people have toward their actions relies on the liberal or strict attitudes of their parents (Bachman, 1970; Bachman, Omalley & Johnston, 1978; Rozenberg, 1965).

Dweck and Legget (1998) developed a research-based model and identified 2 kinds of intelligence beliefs: entity intelligence beliefs and incremental intelligence beliefs. People with entity intelligence beliefs tend to consider their personality traits including intelligence as a fixed entity which is innate and congenital, whereas people with incremental orientations toward their intelligences consider intelligence as an incremental entity which is capable of being developed through experience and hard work (Dweck and Legget, 1998; Germalinski *et al*, 1999; Heyman and Dweck, 1988; Hung and Cho, 1997; Rodale and Scraw, 1995).

Alan Jacobwitz (Cited in Cohen, 1980) stated that the entrepreneurial ability is innate. Shine (1994) and Solomon (1988) demonstrated that entrepreneurs and non-entrepreneurs are different in terms of personality traits.

In the present study, we attempt to explore the relationship between a number of psychological features and a special ability (entrepreneurial ability). Specifically, the issue targeted in the study include: investigating the multiple and simple relationships between intelligence beliefs, self-esteem, and achievement motivation and entrepreneurial ability in the students of Shiraz University Agricultural College.

A close consideration of the global development trend reveals that as advanced technology develops, the role of the entrepreneurs gains additional importance. Individual and organizational entrepreneurship is considered as a key component of economic growth. In most developed and developing countries, entrepreneurship has gained increasing importance as the main source of development (The Education Evaluation Organization, 2001).

As Luke (1981) states, entrepreneurial research has expanded throughout America, Europe, and Southeast Asia. In Iran, it has been the subject of interest due to its potentials in creating jobs, its role in economic development, as well as for privatization concerns and optimal management of resources. People are increasingly realizing that nations relying on ideas rather than natural resources have been considerably successful. The present age is the age of wisdom, creativity, and blending of ideas and creativity and entrepreneurship is the key component of development in most countries (Akbari, 2001).

College students, including those present in this study, are the potential forces of the society who are supposed to become professionals in the near future. Moreover, the employment of graduates where they can employ others in addition to themselves and use resources to develop the society is considered as an essential priority for state authorities. The importance of this study relies on the fact that it presents instruments and tests to identify the entrepreneurs' traits and adapt them with the students' social and cultural conditions. Since this study has not been conducted from a psychological point of view, its importance is doubled and it can serve as a basis for future research. Besides, conducting investigations on entrepreneurs as people who are affected by a set of variables is important in terms of a dependent variables or criteria. In other words, what variables affect or are correlated with entrepreneurial behavior? Exploring the personality traits of entrepreneurs have been an interesting topic in the psychology of entrepreneurship.

Furthermore, given the fact that over half of the 70-million population of the country consists of young people who, along with their families and even policy-makers, are primarily concerned with finding a job, being aware of the entrepreneurial personality traits can help authorities identify potential entrepreneurs and guide them through realizing their potentials.

The study puts forth 5 primary and 10 secondary questions:

1- Are intelligence beliefs and entrepreneurial abilities of the students of Shiraz University Agricultural College correlated?

a. Are intelligence beliefs and entrepreneurial abilities of the female students of Shiraz University Agricultural College correlated?

b. Are intelligence beliefs and entrepreneurial abilities of the male students of Shiraz University Agricultural College correlated?

2- Are self-esteem and entrepreneurial abilities of the students of Shiraz University Agricultural College correlated?

a. Are self-esteem and entrepreneurial abilities of the female students of Shiraz University Agricultural College correlated?

b. Are self-esteem and entrepreneurial abilities of the male students of Shiraz University Agricultural College correlated?

3- Are achievement motivations and entrepreneurial abilities of the students of Shiraz University Agricultural College correlated?

- a. Are achievement motivations and entrepreneurial abilities of the female students of Shiraz University Agricultural College correlated?
 - b. Are achievement motivations and entrepreneurial abilities of the male students of Shiraz University Agricultural College correlated?
- 4- According to self-esteem, intelligence beliefs, and achievement motivations, what percentage of the variance of entrepreneurial abilities can be predicted?
 - a. According to self-esteem, intelligence beliefs, and achievement motivations, what percentage of the variance of entrepreneurial abilities in female students can be predicted?
 - b. According to self-esteem, intelligence beliefs, and achievement motivations, what percentage of the variance of entrepreneurial abilities in male students can be predicted?
 - 5- How is the frequency of the entrepreneurial abilities of the students of Shiraz University Agricultural College distributed?
 - a. How is the frequency of the entrepreneurial abilities of the female students of Shiraz University Agricultural College distributed?
 - b. How is the frequency of the entrepreneurial abilities of the male students of Shiraz University Agricultural College distributed?

Methodology:

The sample size was 148. Following sampling, data were gathered using a number of various methods. Conducting a test on a small sample of respondents revealed that the completion of each questionnaire takes 40-5- minutes due to the large number of questions. Therefore, 4 students working in the student unions were chosen to help the researchers in distributing the questionnaires among the respondents. They were told about the goals of the study and the sampling method in a meeting. Also, they were trained on how to communicate with the subjects and what the questions imply.

Instruments: all the data were gathered using written tests done by the subjects. Tests for entrepreneurial ability, intelligence beliefs, the Cooper-Smith self-esteem questionnaire, and the Achievement motivation questionnaire were used, which are presented in table 2.

Table 2: Reliability scores of tests

Cronbach's alpha	test
0.8	Entrepreneurship
0.7	Intelligence beliefs
0.8	Self-esteem
0.8	Achievement motivation

Data analysis:

Data analysis was conducted through descriptive and inferential statistics. The adopted descriptive methods included the presentation of SD, mean, frequency, and graphs. The hypotheses were tested using the Pearson's correlation coefficient, multiple correlation coefficient, and multivariate regression. Data were analyzed using the SPSS software.

Results:

Hypothesis 1:

there is a positive correlation between intelligence beliefs and entrepreneurship in the students of Shiraz University Agricultural College .

Table 3: correlation coefficients of entrepreneurship and intelligence beliefs

significance	r	variables
0.05	0.598	entrepreneurship
		Intelligence beliefs

According to table 3, the calculated correlation coefficient for entrepreneurship and intelligence beliefs is 0.598, which is significant at 0.05. Therefore, it could be concluded that these two variables are correlated at 0.05.

Hypothesis 1a: there is a positive correlation between intelligence beliefs and entrepreneurship in the female students of Shiraz University Agricultural College .

Table 4: correlation coefficients of entrepreneurship and intelligence beliefs for females

significance	r	variables
0.05	0.654	entrepreneurship
		Intelligence beliefs

According to table 4, the calculated correlation coefficient for entrepreneurship and intelligence beliefs for female students is 0.654, which is significant at 0.05. Therefore, it could be concluded that these two variables are correlated at 0.05.

Hypothesis 1b: there is a positive correlation between intelligence beliefs and entrepreneurship in the male students of Shiraz University Agricultural College .

Table 4: correlation coefficients of entrepreneurship and intelligence beliefs for males

significance	r	variables
0.05	0.645	entrepreneurship
		Intelligence beliefs

According to table 5, the calculated correlation coefficient for entrepreneurship and intelligence beliefs for male students is 0.645, which is significant at 0.05. Therefore, it could be concluded that these two variables are correlated at 0.05.

Hypothesis 2:

there is a positive correlation between self-esteem and entrepreneurship in the students of Shiraz University Agricultural College

Table 6: correlation coefficients for entrepreneurship and self-esteem

significance	r	variables
0.05	0.573	entrepreneurship
		Self-esteem

According to table 6, the calculated correlation coefficient for entrepreneurship and self-esteem for all students is 0.573, which is significant at 0.05. Therefore, it could be concluded that these two variables are correlated at 0.05.

Hypothesis 2a: there is a positive correlation between self-esteem and entrepreneurship in the female students of Shiraz University Agricultural College

Table 7: correlation coefficients for entrepreneurship and self-esteem for female students

significance	r	variables
0.05	0.412	entrepreneurship
		Self-esteem

According to table 7, the calculated correlation coefficient for entrepreneurship and self-esteem for female students is 0.412, which is significant at 0.05. Therefore, it could be concluded that these two variables are correlated at 0.05.

Hypothesis 2b: there is a positive correlation between self-esteem and entrepreneurship in the male students of Shiraz University Agricultural College .

Table 8: correlation coefficients for entrepreneurship and self-esteem for male students

significance	r	variables
0.05	0.512	entrepreneurship
		Self-esteem

According to table 8, the calculated correlation coefficient for entrepreneurship and self-esteem for male students is 0.512, which is significant at 0.05. Therefore, it could be concluded that these two variables are correlated at 0.05.

Hypothesis 3:

there is a positive correlation between achievement motivation and entrepreneurship in the students of Shiraz University Agricultural College .

Table 9: correlation coefficients for entrepreneurship and achievement motivation for all students

significance	r	variables
0.05	0.480	entrepreneurship
		Achievement motivation

According to table 9, the calculated correlation coefficient for entrepreneurship and achievement motivation for all students is 0.480, which is significant at 0.05. Therefore, it could be concluded that these two variables are correlated at 0.05.

Hypothesis 3a: there is a positive correlation between achievement motivation and entrepreneurship in the female students of Shiraz University Agricultural College.

Table 10: correlation coefficients for entrepreneurship and achievement motivation for female students

significance	r	variables
0.05	0.433	entrepreneurship
		Achievement motivation

According to table 10, the calculated correlation coefficient for entrepreneurship and achievement motivation for female students is 0.433, which is significant at 0.05. Therefore, it could be concluded that these two variables are correlated at 0.05.

Hypothesis 3b: there is a positive correlation between achievement motivation and entrepreneurship in the male students of Shiraz University Agricultural College .

Table 11: correlation coefficients for entrepreneurship and achievement motivation for male students

significance	r	variables
0.05	0.6	entrepreneurship
		Achievement motivation

According to table 11, the calculated correlation coefficient for entrepreneurship and achievement motivation for male students is 0.600, which is significant at 0.05. Therefore, it could be concluded that these two variables are correlated at 0.05.

Research question 1:

according to self-esteem, achievement motivations, and intelligence beliefs, what percentage of the variance for entrepreneurial ability can be predicted?

In order to measure the possibility to predict entrepreneurship through self-esteem, achievement motivation, and intelligence beliefs, we conducted a multiple regression analysis based on the predicting variables. The results are as follows:

Table 12: results of multiple regression analysis of self-esteem, achievement motivation, and intelligence beliefs with entrepreneurship using the repeated measure

Predictors, regression coefficients			Statistical indexes				Criteria variable	model
Self-esteem	Achievement motivation	Intelligence beliefs	P	F	R ²	R		
---	---	$\beta = 2/028$	<01	7.312	358.0	598.0	entrepreneurship	1
---	---	$T = 21/708$						
---	---	$P < 0/01$						
---	$\beta = 0/198$	$\beta = 1/992$	<01	26.163	277.0	528.0	entrepreneurship	2
---	$T = 3/219$	$T = 17/37$						
---	$P < 0/01$	$P < 0/01$						
$\beta = 0/383$	$\beta = 0/151$	$\beta = 1/965$	<01	02.123	304.0	552.0	entrepreneurship	3
$T = 5/56$	$T = 3/46$	$T = 17/43$						
$P < 0/000$	$P < 0/01$	$P < 0/01$						

Regression analysis of entrepreneurship based on the predictors: The regression analysis showed that intelligence beliefs along with achievement motivation and self-esteem explained 30% of the changes in entrepreneurship, with a multiple correlation of 0.555, which was significant at 0.05. Given that, the beta coefficients for intelligence beliefs, achievement motivation, and self-esteem were 1.695, 0.151, and 0.383, respectively, which were all significant at 0.05.

The regression analysis for the female students revealed that the variables explained 30 percent of the changes in entrepreneurship of the female students, with a multiple correlation of 0.555, which was significant at 0.05. Given that, the beta coefficients for intelligence beliefs, achievement motivation, and self-esteem were 1.886, 0.196, and 0.444, respectively, which were all significant at 0.05.

The regression analysis for the male students revealed that the variables explained 30 percent of the changes in entrepreneurship of the female students, with a multiple correlation of 0.555, which was significant at 0.05. Given that, the beta coefficients for intelligence beliefs, achievement motivation, and self-esteem were 2.063, 0.181, and 0.322, respectively, which were all significant at 0.05.

Discussion and conclusion:

In order to validate the entrepreneurship test, it is required that entrepreneurs be selected based on their performances. Then, the test should be conducted on them so that the test is validated under better circumstances. The psychological antecedents of entrepreneurship across entrepreneur and non-entrepreneur groups should be investigated through comparative studies. After teaching psychological antecedents of entrepreneurship such as creativity, achievement motivation, self-esteem and the like, the effects of these factors alone and together with other factors should be studied in an experimental study. It is proposed that the relationship between other psychological variables such as type A, responsibility, and entrepreneurship be investigated. Non-psychological factors such as social supports and management styles should be investigated in terms of their relationships with entrepreneurship. Family features, number of children, child-raising methods of entrepreneurs and non-entrepreneurs should be investigated. It is suggested that subcultures and minorities be investigated in terms of entrepreneurial abilities. In order to generalize the findings, it is suggested that this study be repeated in other universities, or non-student groups in industrial, production, and service centers. Social, cultural, and psychological obstacles of entrepreneurship should be investigated.

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