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The Impact of Business Attitude on Entrepreneurial Behavior in Postgraduate Students: A Cross-sectional Study During the COVID-19 Pandemic

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Abstract

Background: Entrepreneurship and business behavior are of great significance in developing countries, such as Iran, due to the unemployment crisis. Today's economic status and population composition have propelled everyone to find effective solutions in the economic arena. Therefore, appropriate educational models for students and programs to encourage students to turn to entrepreneurship and create new businesses are vital.

Objectives: The present study aimed to determine the impact of business attitude on entrepreneurial behavior in postgraduate students.

Methods: This cross-sectional study was conducted on the postgraduate students of Qazvin University of Medical Sciences in 2021. Data were collected using the standard questionnaires of Aution et al. and Leon Dice Zamptakis and Vasilis Mustakis. Data analysis was performed in the R software version 4.0.4 using Spearman's or Pearson's correlation-coefficient and multivariate analysis of variance (MANOVA).

Results: The mean age of the participants was 28.17 $\pm$ 6.297 years. Pearson's correlation-coefficient indicated a significant, inverse correlation between age and attitudes toward competitiveness and entrepreneurial culture ($r = -0.210$; $P = 0.002$ and $r = -0.177$; $P = 0.01$, respectively). In addition, the results of multiple linear regression analysis showed that the attitude to business had a significant, inverse effect on entrepreneurial behavior ($r = -0.259$; $P < 0.001$).

Conclusions: According to the results, students' unpreparedness for self-employment activities highlights the need for changing the attitude of postgraduate students in this regard by explaining the prevalence of the COVID-19. Due to the outbreak of the disease, numerous startups and personal businesses were shut down. Therefore, students are mostly reluctant to become involved in entrepreneurial activities despite their business attitude.

Keywords: Entrepreneurial Behavior, Business Attitude, Postgraduate Students, COVID-19

1. Background

Entrepreneurship and business behavior are of great significance in developing countries, such as Iran, due to the unemployment crisis. Statistics suggest that a large number of university graduates enter the labor market every year, while the market capacity does not meet the demand of this population (1). On the other hand, previous findings indicate that entrepreneurship and business creation are important sources of employment in the private sector (2). Linnan emphasizes the key role of business behavior in entrepreneurship since the individuals who have a business attitude may become successful entrepreneurs in the future (3).

These factors are paramount in the economic development of every country, especially developing countries. In Iran, the market trend has been toward the creation and development of private businesses in recent decades, and various programs have been implemented for this purpose. One of these programs is to promote entrepreneurial characteristics and behaviors in students during their academic education, which has been presented in the form of the movement of higher education institutions toward third-generation universities.

As central institutions in society, universities play a

key role in entrepreneurship development. Therefore, it is essential to improve students' abilities and skills in this regard in the university environment. Despite the importance of the issue, educational institutions have failed to institutionalize entrepreneurial behavior in their students (4). Entrepreneurship and job creation are essential in today's society, especially in the student community. Entrepreneurship could greatly change the economic, social, and industrial conditions of a country. The term 'entrepreneurship' originated from the French word Entreprendre, meaning commitment. Entrepreneurship refers to a process taking place within a network of social relations and the process of making a profit through a new, unique, and valuable combination of resources in an environment with ambiguity and uncertainty. Nowadays, entrepreneurship is defined as a product of creativity and knowledge that promotes development. Entrepreneurship leads to self-reliance, resource productivity, risk-taking, purposefulness, prioritization, and value creation (5). In Iran, entrepreneurship development is considered essential to solve the general problems of society, such as underdevelopment and unemployment.

The educational system plays a pivotal role in the development and training of human resources. In societies with a dynamic educational system, entrepreneurship and creativity are more common compared to other communities, and entrepreneurship education is of great importance and scope (6). The primary goals of entrepreneurship training include acquiring knowledge associated with entrepreneurship, determining and strengthening the capacity, aptitudes, and skills of entrepreneurship, and inducing risk-taking and promoting attitudes to accept change (7). In order to acquire business and entrepreneurial behaviors in the workplace, it is essential to promote such training and skills at the university level (8).

The concept of entrepreneurial university is pursued with three key issues; first, the university changes to an entrepreneurial organization. Second, faculty members and professors should take steps toward entrepreneurship, and students should be provided with the necessary training. Third, the university should continue interacting with the environment (9). Entrepreneurship is a symbol of effort and success in the business world, and entrepreneurial behavior leads to important outcomes in terms of development theories and policymaking (10). Since business is closely associated with entrepreneurship, entrepreneurship is considered a key component of the business environment in the economy, as well as an influential factor in creating employment and reducing unemployment (6). The success of a business is closely correlated with its proper management. In fact, efficient business management results in the growth of the business.

Entrepreneurship is synonymous with business ownership (11). Today's economic status and population composition have propelled everyone to find effective solutions in the economic arena. In this respect, appropriate educational models for students and programs to encourage students to turn to entrepreneurship and creating new businesses are vital.

2. Objectives

Given the importance of entrepreneurial behavior in the tendency to create a business, which is a concept rarely discussed in Iran, the present study aimed to find the gaps in this regard by examining the current situation. By providing this information to academic planners, students will be able to collaborate and develop the entrepreneurial process and business creation.

3. Methods

3.1. Study Design

This cross-sectional study was conducted on the postgraduate students of Qazvin University of Medical Sciences, Iran in 2021.

3.2. Participants

The participants were randomly selected from each school and field since the number of the postgraduate students differed in each school. Questionnaires were randomly distributed among the students; if the students were unwilling to continue participation, the questionnaires were excluded from the study and analysis. Out of 240 delivered questionnaires, 210 were completed (response rate: 87.5%).

3.3. Data Collection

Data were collected using a questionnaire consisting of two sections. The first section contained demographic data on age, gender, and field of study. The second section contained two valid questionnaires of business attitude and entrepreneurial behavior. These questionnaires were applied due to their compatibility with the university context and short, yet comprehensive questions. In addition, the questionnaire developed by Aution et al., which consists of 20 items scored based on a Likert Scale, was used to evaluate the attitude of the students toward business. The dimensions of this questionnaire include

entrepreneurial intentions, attitude toward competitiveness, attitude toward money, attitude toward change, attitude toward entrepreneurship, perceptions of the university environment, environmental support, and environmental barriers. The validity and reliability of this questionnaire have been confirmed at the Cronbach's alpha of 0.84 in the study by Mardanshahi, which was conducted with a similar aim (3).

In order to investigate the students' entrepreneurial behavior, the standard questionnaire of Leon Dice Zamptakis and Vasilis Mustakis was used, which consists of 12 items scored based on a Likert Scale and various dimensions, including the reduction of bureaucratic barriers, changing staff's behavior, strategic insight, creating an energetic work environment, and supportive environment. The validity and reliability of this questionnaire have been confirmed at the Cronbach's alpha of 0.72 in the study by Asadnia et al. (12).

3.4. Statistical Analysis

Data analysis was performed in the R software version 4.0.4. Based on data distribution, Spearman's or Pearson's correlation-coefficient was used to assess the correlation between the two quantitative variables. In addition, MANOVA and ANOVA were employed to evaluate the effect of business attitude on entrepreneurial behavior. Multiple linear regression analysis was also to estimate the regression coefficients at 95% confidence interval. In all the statistical analyses, the significance level was set at 0.05.

4. Results

The mean age of the participants was 28.17 $\pm$ 6.297 years. In total, 53 students (24.90%) were male, and 160 (75.10%) were female. Table 1 shows the other demographic characteristics of the participants.

Table 1. Demographic Characteristics of Study Population

Variables	No. (%)
Sex	
Male	53 (24.90)
Female	160 (75.10)
Education	
MSC	168 (78.90)
PHD	45 (21.10)
Field	
Geriatric nursing	22 (10.30)
Psychiatric nursing	14 (6.60)
Midwifery counseling	23 (10.80)
Microbiology	17 (8.00)
Parasitology	28 (13.10)
Midwifery	11 (5.20)
Biochemistry	12 (5.60)
Health services management	20 (9.40)
Occupational health engineering	17 (8.00)
Environmental health engineering	10 (4.70)
Bacteriology	32 (15.00)
Critical care nursing	7 (3.30)

The results of Pearson's correlation-coefficient indicated a significant correlation between age and attitude to competitiveness as with increased age, the attitude to competitiveness diminished significantly ($r = -0.210$; $P = 0.002$). Furthermore, a significant correlation was observed between age and entrepreneurial culture as with increased age, entrepreneurial culture decreased significantly ($r = -0.177$; $P = 0.01$). A significant, inverse correlation was also observed between age and a supportive environment ($r = -0.228$; $P = 0.001$). On the other hand, a significant correlation was denoted between entrepreneurial goals and entrepreneurial behavior ($r = -0.466$; $P < 0.001$), while no significant correlation was observed between the attitude toward competitiveness and entrepreneurial behavior ($r = 0.089$, $P = 0.19$). A significant, inverse correlation was also denoted between the attitude to money and entrepreneurial behavior ($r = -0.116$; $P < 0.001$).

The effect of business attitude factors on the variable of entrepreneurial behavior was investigated using multivariate regression analysis, and correlations were observed between the variables of entrepreneurial intention, the attitude to change, and entrepreneurial culture. Moreover, a significant and direct association was denoted between the attitude toward competitiveness and entrepreneurial culture, and significant correlations were also observed between entrepreneurial intentions and changes in individuals' behavior, a dynamic business environment, strategic insight, and a supportive environment. Finally, significant and direct associations were denoted between the variables of the attitude toward competitiveness, attitude to money, and a supportive environment (Table 2).

According to the results of linear regression analysis, the variables of gender, education level, and age had no significant effect on entrepreneurial behavior. Meanwhile, the attitude to business had a significant impact on entrepreneurial behavior. The regression coefficients of business attitudes also indicated that entrepreneurial behavior decreased by 0.259 units per unit of increase in business attitudes (Table 3).

Table 2. Impact of Business Attitude Factors on Entrepreneurial Behavior

Parameter	Entrepreneurial Culture		Changes in People's Behavior		Activity Environment		Strategic Insights		Supportive Environment	
	Beta (95% CI)	P-Value	Beta (95% CI)	P-Value	Beta (95% CI)	P-Value	Beta (95% CI)	P-Value	Beta (95% CI)	P-Value
Intercept	2.484 (0.584, 4.384)	0.011	12.946 (7.766, 18.126)	< 0.001	6.865 (4.051, 9.678)	< 0.001	9.109 (5.984, 12.235)	< 0.001	3.622 (0.814, 6.43)	0.012
Entrepreneurial intentions	-0.127 (-0.183, -0.07)	< 0.001	-0.338 (-0.492, -0.184)	< 0.001	-0.168 (-0.252, -0.085)	< 0.005	-0.151 (-0.244, -0.058)	0.002	-0.235 (-0.318, -0.151)	< 0.001
Attitudes towards competitiveness	0.124 (0.048, 0.201)	0.002	0.053 (-0.156, 0.261)	0.621	-0.007 (-0.12, 0.107)	0.909	-0.063 (-0.189, 0.063)	0.323	0.26 (0.147, 0.374)	< 0.001
Attitude to money	0.029 (-0.052, 0.11)	0.483	0.086 (-0.136, 0.308)	0.447	-0.043 (-0.164, 0.077)	0.478	-0.067 (-0.2, 0.067)	0.329	0.184 (0.064, 0.304)	0.003
Attitude to change	-0.111 (-0.182, -0.04)	0.002	-0.112 (-0.306, 0.083)	0.259	-0.04 (-0.145, 0.066)	0.46	-0.014 (-0.131, 0.103)	0.814	-0.113 (-0.219, -0.008)	0.036
Attitudes towards entrepreneurship	0.045 (-0.031, 0.121)	0.241	-0.036 (-0.243, 0.171)	0.733	0.095 (-0.017, 0.207)	0.097	0.093 (-0.032, 0.218)	0.144	0.025 (-0.087, 0.137)	0.659
Perception of the university environment	0.005 (-0.036, 0.047)	0.799	0.027 (-0.086, 0.14)	0.639	-0.017 (-0.079, 0.044)	0.578	-0.063 (-0.131, 0.005)	0.07	0.127 (0.066, 0.188)	< 0.001
Environmental support	0.008 (-0.075, 0.091)	0.849	0.103 (-0.124, 0.329)	0.372	0.053 (-0.07, 0.176)	0.393	-0.054 (-0.191, 0.082)	0.433	-0.069 (-0.191, 0.054)	0.272
Environmental barriers	-0.01 (-0.083, 0.063)	0.788	-0.014 (-0.212, 0.184)	0.889	-0.125 (-0.233, -0.018)	0.023	-0.132 (-0.252, -0.013)	0.03	-0.063 (-0.171, 0.044)	0.247

Table 3. Influential Factors in Entrepreneurial Behavior

Parameter	Beta (95% CI)	P-Value
Gender	0.613 (-0.76, 1.986)	0.379
Age	-0.068 (-0.162, 0.026)	0.155
Education	-1.411 (-4.054, 1.233)	0.294
Attitude to business	-0.259 (-0.364, -0.154)	< 0.001

5. Discussion

The present study aimed to investigate the effect of business attitudes on entrepreneurial behavior in postgraduate students of Qazvin University of Medical Sciences. According to the findings, which are consistent with previous studies, the attitude to business is an influential factor in entrepreneurial behavior. In addition to the ability of individuals to discover, evaluate, and exploit opportunities, human capital also impacts the intentions, behaviors, and attitudes of individuals. These factors are paramount in the economic development of every country, especially developing countries.

The trend of Iran has been toward the creation and development of private businesses in recent decades, and various programs have been implemented for this purpose. Strengthening the attitude to business in universities could motivate students to develop influential entrepreneurial behaviors. The results of the present study confirmed a significant correlation between business attitude and entrepreneurial behavior. Accordingly, entrepreneurial behavior decreased with an increased attitude to business. In line with this finding, the study by Ulmanis (11) indicated that the approach of increasing business attitudes encourages entrepreneurial behavior among individuals although it may not help create a dynamic and creative competitive environment. In other words, infrastructure factors and managerial support also play a key role in ensuring the occurrence of entrepreneurial behavior in individuals and creating an entrepreneurial environment (13). The findings of Mardanshahi indicated the significance of the correlation between these components, and a direct correlation was also reported between the desire to start a business and entrepreneurial behavior (3). Moreover, Zulfiqar et al. applied new educational methods (eg, simulated games) and reported that training on creating a positive attitude to business is essential to developing entrepreneurial behavior in students (14). Furthermore, the study by Kolvereid indicated that the graduates who were more business-minded and had business training were more likely to develop entrepreneurial behavior (15).

According to the study by Blankesteijn et al., entrepreneurs helped with the necessary training for social participation and social value as social capital (16). According to Lopez, the business dimension in university entrepreneurship plays a key role in the development of social entrepreneurship. Universities institutionalize entrepreneurial behavior by linking industry and academia, updating technology, accessing job centers, gaining empirical skills, and benefiting from international experiences, which promote entrepreneurial behavior (17). In this regard, Syed et al. assessed the change in the approach of universities from mere educational and research planning to instilling entrepreneurial behavior through designing academic entrepreneurship methods. The key factors affecting the emergence of entrepreneurial behavior include entrepreneurial culture, required infrastructure, policymaking, and internal resource management (18).

The results of the present study showed an inverse correlation between the attitude to business and entrepreneurial behavior, as well as the students' unpreparedness for self-employment activities, entrepreneurial behavior, and the desire to become employed, which implied a change in the attitude of postgraduate students in

recent years. One of the main reasons could be the COVID-19 outbreak, which has caused multiple startups to shut down and go bankrupt due to the crisis. Consequently, numerous financial losses have been documented. Therefore, the students in our study were reluctant to develop entrepreneurial behavior despite their business attitudes. Furthermore, their preference was to create financial and intellectual stability by turning to governmental occupations.

The findings of the current research indicated no significant correlations between gender, education level, age, and entrepreneurial behavior. Therefore, it could be concluded that these demographic variables did not cause an obstacle to entrepreneurial behavior and the improvement of business attitudes. This could be viewed as an opportunity to enhance business attitudes and strengthen entrepreneurial behavior through proper training and support programs.

To summarize, our findings indicated that despite the studies regarding the need to strengthen entrepreneurial behavior in organizations across the world and given the key role of this behavior in innovation, creativity, and establishing new businesses, the issue has not been sufficiently addressed in the academic environment and higher education institutions, especially with an emphasis on the effect of a business attitude on instilling entrepreneurial behavior. Therefore, the assessment of these factors, their interactive effects (especially in medical universities), and their role in creating new businesses for economic growth may yield important outcomes.

5.1. Limitations of the Study

The main limitation was the lack of some students' cooperation in completing the questionnaire, and further involvement could be attained by encouraging the students to complete the questionnaire through informing and explaining the benefits of the study.

5.2. Conclusions

Based on the results of this study, it is suggested that university administrators and policymakers pay special attention to various dimensions of business attitudes, including entrepreneurial intentions, the attitude to change, the attitude to money, the attitude toward competitiveness, the attitude to entrepreneurship, perception of the university environment, environmental support, and environmental barriers, in order to improve the status of entrepreneurial behavior in students and take effective steps toward developing entrepreneurial behavior through proper decision-making and taking effective measures to improve the current situation. University planners could develop educational programs, hold specialized workshops, implement scientific visits, and hold startup competitions in order to improve students' attitudes to change and promote competitiveness, which ultimately improve students' business attitudes and entrepreneurial behavior. Moreover, the government should support entrepreneurial behavior and create new businesses by implementing support programs to enhance the current situation, especially regarding the stability of the expected economic and political conditions. Financial and banking support, proper training on finances, and attracting investors should also be considered in strengthening environmental support. Furthermore, the educational content in universities and teaching methods should be revised in order to enhance entrepreneurial intentions and propel the emergence of entrepreneurial behavior.

Since this study was carried out during the COVID-19 outbreak, it is recommended that further studies be conducted to elaborate on the status of attitudes to business and entrepreneurial behavior in this period, as well as the impact of the current pandemic on the development of entrepreneurial behavior and business attitudes in students, as well as the economic status and job opportunities.

Footnotes

Authors' Contribution: S.R.: study concept and design, analysis and interpretation of data, statistical analysis; A.A.: analysis and interpretation of data, drafting of the manuscript , study supervision; L.A.: acquisition of data, critical revision of the manuscript, study supervision; F.H.: statistical analysis, acquisition of data, study supervision; F.V.: acquisition of data, study supervision; Z.N.: study concept and design, drafting of the manuscript, administrative, technical, and material support.

Conflict of Interests: There is no conflict of interest.

Ethical Approval: The study protocol was approved by Ethics Committee of Qazvin University of Medical Sciences (ethics code: IR.QUMS.REC.1399.032).

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