Full Length Research Paper

Exploring the Impact of Age and Gender on Entrepreneurial Behavior Traits Among Business Administration Students and Professionals

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The main objective of this study is to identify the elements that show the influence of age and gender on entrepreneurial behavior characteristics observed in both enterprising professionals and students of Business Administration. It was based on a survey with 851 professionals registered by the Regional Board of Directors of Business Administration of Bahia and with 207 students from public and private universities in Salvador, Bahia. Our hypothesis was that the age and gender of the respondents influence their entrepreneurial profile. The results associated with a structural modeling equation indicated that gender did not show a significant relationship with entrepreneurship since the age variable explains the variability of this construct. This study, therefore, may contribute to students' education and the updating of professional entrepreneurs since these findings indicate specific patterns of limitations and biases concerning entrepreneurship.

Key words: Age, gender, entrepreneurs, behavioral characteristics, Structural Equation Modeling.

INTRODUCTION

The use of the term entrepreneurship dates back to the Middle Ages, specifically the thirteenth century, and has as a landmark the commercial activities of Marco Polo. For a long time, this term was used for various purposes. Only in the twentieth century, the meaning of "entrepreneur" started to be associated with the term as it is used today: an individual who is involved in a "process of creating something new and assuming the risks and rewards arising from it" (Hisrich and Peters, 2004, p. 29).

In today's historical context, it highlights the important contribution of Joseph Schumpeter (1982), who argued that entrepreneurs are "the driving force of economic growth, marketing innovations that make obsolete existing products and technologies" (Barros and Pereira, 2008, p. 977)

In this sense, Schumpeter (1982) has associated innovation with entrepreneurship as well as indicated the important contribution of entrepreneurs in the construction of economic development.

In the same way, based on the economic grounds of Schumpeter (1982), which reinforce this approach, we feel the need to highlight the discussions on the

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behavioral basis defended by Weber (1978).

This author argues that the value system is indispensable for the explanation of entrepreneurial behavior and defines entrepreneurs as "innovative, independent people whose role in business leadership is inferred through a strong formal authority" (Filion, 1999, p. 8).

In Schumpeter's point of view, the entrepreneur is an individual with characteristics such as initiative, authority and foresight (ability to predict) and is not someone who merely knows how to manage the routine of a business; innovation is the driving force of many significant phenomena developed in the entrepreneurship domain that inspire economy.

Schumpeter follows a path in a psychological approach that defines the concept of observable behavior: the individual entrepreneur feels satisfaction by creating, executing things or simply by exercising energy and ingenuity.

For this author, entrepreneurs have a distinct profile of motivation, and believe that economic action would not exist if there were no needs to be fulfilled. The entrepreneur, therefore, is motivated by the desire for power and independence provided by the success of the business and social distinction.

Aiub (2002) considers that the fundamental feature of entrepreneurs is that they provide guidance in the formulation of strategies for action, taking into account that a continuous and deep reflection is needed. Kaldana and Ruzzier (2012) analyzed the entrepreneurial characteristics of students of Business Administration and Economics at a university in Slovenia. Bonura (2011) examined the influence of age on metacognitive perspectives of Business Administration students. From three experiments, the study found that the higher the individual's age, the greater their metacognitive levels are.

In this context, the objective of this study is to examine if age or gender may affect the entrepreneurial characteristics of an individual. We intend to answer the following research problem: Do age and/or gender of students and professionals of Business Administration affect their entrepreneurial characteristics?

This study aims at contributing to the discussions involving personal variables of individuals such as age and gender by analyzing their relationships with the metacognitive level. As long as these relationships are identified with greater emphasis on the examined groups, the evidence from this study will contribute to targeting specific training professionals and students. This paper is structured into five sections. In this section (introduction), we contextualize and problematize the issue and justify the research. The next section presents the theoretical basis with the main studies involving entrepreneurial characteristics. In section 3, the methodological procedures are presented and, in sequence, the data are statistically analyzed in section 4. Finally, in section 5, we have the conclusions of the paper presenting the main results and contributions of this research.

LITERATURE REVIEW AND HYPOTHESIS BUILDING

According to Aiub (2002), the discussion on the fundamental characteristics of entrepreneurs should be the foundation for formulating action strategies. Such entrepreneurial characteristics should be highlighted and discussed in depth since they establish a forum to interact and develop practical knowledge, essential for entrepreneurial training.

David McClelland, considered one of the most recognized prominent researchers in this area, conducted a survey in different countries and contexts on the behavioral perspective of the entrepreneur (McClelland, 1987; Venturi, 2003). Among the main results, McClelland (1987) found out that several factors such as the number of previous jobs or started businesses, having family members who already are entrepreneurs and level of schooling are not decisive factors in the business success of a person. In this context, the author indicates social position as a factor that does not establish an individual as an entrepreneur; on the other hand, he found out that his/her personality features and personal skills do have a role to play.

Thus, for the purposes of empirical analysis, this research adopts the theory of David McClelland, since it is one of the most recognized authors in the area. He devoted many years of his academic life to the study of specific EBC, having drawn his conclusions after extensive fieldwork carried out in many countries. Even so, with this approach, we consider the limitations which, perhaps, may occur due to the choice of a single theoretical model.

In studies on the impact of an individual's behavior in developing countries, McClelland (1972) defines entrepreneurs as individuals who have as main characteristic the high need for achievement. In research with young people from different countries, this author identified six critical competences for business success: a) risk acceptance b) instrumental vigorous and/or activity c) individual responsibility, d) knowledge of results of decisions, e) long-term planning and f) organizational skills.

Based on the research carried out by McClelland, the consulting firm Management Systems International (MSI) developed a new survey that obtained as a result the determination of ten entrepreneurial behavioral characteristics of successful professionals. These characteristics were evaluated in a pilot test, applied in the United Kingdom, Malawi and Argentina. After the pilot program, the United Nations Conference on Trade and Development (UNCTAD), through the United Nations Program for Development (UNDP), spread this methodology through agreements with developing countries (GROSSMANN, 2005). The project was named

Project Empretec (UNCTAD, 2008) and was released in 1988, in Argentina (Sebrae, 2009).

McClelland (1972) started from the assumption that human motivation contributes to the economic growth of a nation. According to him, human motivation comprises three dominant needs: the need for achievement, the need for planning and the need for power.

The need for achievement is like the desire for reaching something complex, which demands a standard of success. It is the domain of multiple tasks and over-coming challenges. McClelland does not clearly define the need for achievement but he implicitly leads us to understand it as the necessity that the individual has to do a good job and be recognized for it (Gouveia and Batista, 2007).

Thus, individuals who have the need for achievement have a strong inclination to take responsibility and face calculated risks in the search of success and recognition.

The need for planning is the desire to establish personal relationships, to avoid conflicts and establish strong friendship with trust and mutual understanding. This comes from a social need to develop meaningful relationships with people (Gouveia and Batista, 2007). According to Bowditch and Buono (2002), the need for planning stimulates the individual's actions in carrying out activities in an organization.

Finally, the need for power as defined by McClelland (1972, p. 211) is "a concern with the control of the means to influence a person". This need reveals the desire to influence or control, to be responsible and have subordinates. Strong-willed people generally seek power positions of leadership as well as are interested in acquiring and maintaining prestigious positions and reputation (Gouveia and Batista, 2007).

Bowditch and Buono (2002) consider that, on the needs of planning and power, some people are motivated by social needs, while others by the need to achieve goals and gain status and authority over others.

McClelland (1978) states that every human being has a predominant profile of need, be it achievement, planning or power and that, to a greater or lesser extent, it influences their activities. Individuals with higher need for achievement are more likely to develop analytical skills, which is essential for business success.

In the context of the needs for achievement, five Entrepreneurial Behavior Characteristics (EBC) were categorized. The first feature is the search of opportunities and initiative. This feature highlights the need of an entrepreneur to do things before being asked or before being compelled by an unforeseen business. The second characteristic is the calculated risk inclination. In this feature, the entrepreneur can analyze options and evaluate risks in a decisively way. His action is focused on risk reduction and control of the results.

The third feature is the persistence. One key behavior of an entrepreneur is the ability to act in the context of significant limitations and be persistent with the changing

strategies of his acting in order to face challenges and difficulties.

The fourth characteristic is the need of quality and efficiency. It is the ability of an individual to act in order to perform activities that meet or exceed standards of excellence, using procedures to ensure that this activity is completed on time or that it meets the quality standards provided.

The fifth characteristic is the entrepreneurial commitment. The entrepreneur feels responsible for the performance of the organization and the achievement of goals and objectives.

Within the scope of planning needs, there are three EBC. The sixth characteristic is defined as the search for information. Among the behaviors analyzed by McClelland and expressed by entrepreneurs, one can find the personal inclination to get information about suppliers, customers and competitors or research into how to produce a product or provide a service. The seventh feature is goal setting. This feature argues that the entrepreneur has the ability to establish goals and objectives that are challenging for his/her business.

The eighth characteristic is defined as systematic planning and monitoring. This feature supports the ability of the entrepreneur to plan their activities dividing them into large tasks and subtasks with deadlines, to revise his/her plans, taking into account the results and changes in circumstances.

The ninth entrepreneurial characteristic is persuasion and contact networks. According to this feature, the entrepreneur employs deliberate tactics to persuade or influence others to achieve their own goals. The tenth and last feature is independence and self-confidence. An entrepreneur continually seeks autonomy in relation to standards and controls. This feature supports the ability of the entrepreneur to maintain his/her point of view even in adverse situations or before disappointing results.

A work based on the methodology of McClelland, using one of the hypotheses of this study, was presented at the World Conference Proceedings of the International Council for Small Business (ICSB). This research examined the difference in EBC between male and female entrepreneurs in India. The sample comprised 50 men and 50 women from the cities of Mumbai, Delhi, Kolkata, Chennai, Hyderabad, Ahmedabad, Lucknow and Bangalore, and various business sectors, including hard-ware, software, pharmaceutical, electronics, mechanical products, electrical and herbaria (Sharma and Laroiya, 2008).

The survey showed characteristics associated with gender. Characteristics unrelated to gender are: high need for achievement, independence, effective leader-ship and capacity of information processing. Specifically on female entrepreneurs, one can highlight four behavioral characteristics: they have a higher level of search of opportunities and initiative, risk aversion, they are creative and persistent (1st, 2nd lower, 3rd and 4th

EBC, respectively). In men, on the other hand, three behavioral characteristics stand out: high levels of confidence; they can evaluate the risk for profit and persuasion (10th, 2nd and 9th EBC, respectively).

Assessing the needs of each gender, women fit more on the needs for achievement, while men in power needs (Sharma and Laroiya, 2008). The main contribution of this research is to provide an analysis of each gender, which enables not only the market but also the academia and teachers to better understand abilities, making adequate allocation of activities possible.

From this discussion and theoretical dialogue, this study suggests two methodological hypotheses to be empirically investigated. The first hypothesis, designated H1, states the greater the age of the respondent, the smaller his/her EBC level will be

A survey conducted among producers of ginger in the state of Nagaland, India, aimed to study the behavioral characteristics of these enterprising individuals. The rationale for this research argues that in the years 2006 and 2007 the region has achieved a world record in the production of ginger. The researchers had the intention to investigate the relationship between this record and the entrepreneurial skills and see which other behavioral issues could be related. Among the results, age was identified as a variable that has significant influence on the entrepreneurial characteristics investigated (JHA, 2010). In another survey, also conducted in India, in the region of Varanasi, 70 entrepreneurs of small scale industries were analyzed. The results showed that younger adults (under 30 years old) had higher EBC compared to more mature people (RAI, 2008).

Reimers-Hild (2005) examined the relationship of behavioral characteristics of entrepreneurial success such as persistence, age and risk inclination of 863 university students from the Midwest, in the United States. The results showed that there is no significant relationship between EBC and the success of a business or the persistence of an entrepreneur. However, the variables risk inclination and age of the subject presented differences statistically distinct.

The second hypothesis - H2 - argues that there are significant differences in the level of EBC established between men and women. Tominc and Rebernik (2006), through a survey of 100 entrepreneurs from Slovenia, claim that there are significant differences between male and female entrepreneurs. The results indicated that women are more motivated and analytical. They are, however, very unsafe, while men were more aggressive and skillful, but very skewed in decision making; in other words, they have a greater inclination to take shortcuts in their judgments and, unlike women, they usually resort to statements, calculations, reports, projections or other type of document that can support their decision.

The discussion of gender differences and their relationship with entrepreneurial behavior is important to identify the personality traits that distinguish each gender.

Collins (2007), in his doctoral thesis examined gender differences in entrepreneurial practices. His study involved 110 respondents in two cities in the Midwest of the United States, employing the Entrepreneurial Quotient Scores (EQS). The study results showed that, in all range of EQS, genders were statistically different: men scored higher on measures of adaptability, risk tolerance and time management, while women scored higher on measures of planning, guidance, intuition and perception. Some other relevant research evidence is that constructed "success in entrepreneurship" was perceived in different ways by male and female entrepreneurs. While women said that success is synonymous with recognition and passion for business, men understand that it is linked to financial rewards and solving challenges.

METHODS

Choice of method

Regarding the type of study, this research is based on a survey, which can be described as the acquisition of data or information on attributes, actions or judgments of a particular group of people, appointed as representative of a target population, by means of an instrument, usually a questionnaire (Pinsonneault and Kraemer, 1993). As basic characteristics of this method of research one can include: (a) the objective of producing quantitative definitions of a population, and (b) making use of a pre-defined instrument.

Thus, to test the relationship between variables, as well as to test the model chosen, we adopted the Structural Equation Model (Structural Equation Modeling - SEM). This methodological instrument was chosen, having in mind that, according to Hair et al. (2005), the structural equation modeling provides a direct method to simultaneously handle multiple dependency relationships with statistical efficiency. The SEM allows for the operation of relationships between variables in a profound fashion, conducting exploratory and confirmatory analyses. Also, it allows for the representation of unobservable concepts in these relationships.

Research participants

The collected sample was determined by the criterion of accessibility and adopts the suggestion of Hair et al. (2005), which, as a general rule, suggest that the database of a survey must contain at least five times more observations than the number of variables that make up the number of data. Since the instrument for collecting data has fifteen questions, for this research it was necessary to collect a sample of at least 150 respondents.

The study of the possible relationship between entrepreneurial behavior characteristics and age and gender was performed by analyzing a sample comprising students and professionals of Business Administration from Salvador (BA). The population was composed of: (a) students in public and private universities and (b) professionals registered by CRA-BA, a body of Directors which governs the profession in the state of Bahia, Brazil (in Portuguese, Conselho Regional de Administração da Bahia).

Data collection was performed through the application of an electronic questionnaire, using Google Docs, provided by CRA-BA and the coordination of courses of universities involved in the research (three public and six private universities). The sample consisted of 1058 respondents, with 851 professionals and 207 students.

Table 1. Characteristics of entrepreneurs.

1 I am confident that I can be successful in any activity that I propose to run
2 I consider carefully the advantages and disadvantages of different alternatives before performing a task
3 When something comes between what I'm trying to do, I persist in my task
4 I try to take into account all the problems that can be presented and I anticipate what to do if they succeed.
5 When I am performing something hard and challenging, I have confidence in my success.
6 The results of the work that I do are always excellent.
7 To obtain my goals, I have different ways to overcome obstacles that may arise.
8 If a certain method to face a problem fails, I turn to another one.

Source: Lima Filho (2013).

Pre-test application of the data collection instrument

We conducted a pre-test for instrument validation and initial observation of the data obtained. According to Raymundo (2009), content validity is a dynamic trial of an instrument by different examiners in order to assess whether the instrument actually covers different aspects of its object.

The research base for the realization of the pre-tests consisted of a sample that reached at least 10% of the total sample required for the study (150 respondents). Therefore, we selected fifteen individual entrepreneurs in the city of Senhor do Bonfim/Ba. We adopted this city, considering that the use of respondents in Salvador/Ba at this stage could prevent the participation of respondents willing to contribute to the final study.

The pretest was divided into two stages. In the first stage, respondents answered the questionnaire individually. Then, shortly after finishing filling out the questionnaire, respondents participated in a focused group session in which they expressed their perceptions and feelings about the stimulus used in the survey and their opinions on the questionnaire used. After due consideration, the questionnaire was adjusted to the final implementation.

The presentation above intended to authenticate and sustain the use of assumptions in this research. In order to test the hypotheses, we used the instrument of entrepreneurial characteristics developed by McClelland (1971, 1972), updated by Raven (2001) and validated by Lima Filho (2013). This is presented in Table 1.

Review for data treatment

Considering the hypotheses of this study, the data processing was carried out in three phases: in the first, the data were analyzed descriptively to characterize the respondents in the sample and examine the distribution of the data; in the second, we tested the nomological validity of variables involved in this analysis, the last step to build validation; and, in the third, we used a "t" test for the equality of independent samples.

Firstly, to test the proposed relationships between constructs, we used the technique of Structural Equation Modeling with Partial Least Square method (SEM-PLS), a method of modeling, considered to be soft, that allows the simultaneous examination of a series of dependency relationships especially when latent variables influence (exogenous) in a relationship and are influenced (endogenous) in subsequent relationships (Fávero et al., 2009; Hair et al., 2005).

Then we have determined the sample size required for processing the SEM-PLS that, according to Chin (1998) is: five respondents for each statement or 5 to 10 times the number of relationships that influence the construct with the largest number of relationships. In this study, the data collection instrument has 8 outputs; therefore, the sample size needed to perform the data

processing was of 80 respondents.

Finally, for possible differences between EBC and gender, respondents were tested, considering the scores of this construct generated in processing SEM-PLS.

The theoretical model of this study sought to describe factors related to EBC. For this purpose, we used the survey instrument previously mentioned (Table 1), composed of eight (8) questions, whose answers, a priori, were expected to be explained by five factors:(a) Entrepreneurial Behavioral Characteristic Achievement (EBC R);(b) Entrepreneurial Behavioral Characteristic Planning (EBC P);(c) Entrepreneurial Behavioral Characteristic Power (EBC O);(d) Age (IDAD) and, finally,(e) Gender (GENE) of the respondent.

It is postulated that the initial model is presented with the following factors:

a) EBC R Factor - measured by questions 3 and 7;
b) Factor EBC P - measured by questions 2, 4 and 8;
c) The EBC Factor - measured by questions 1, 5 and 6;
d) Factor AGE - one question that the respondent indicates his age in years;
e) Factor GENE - one question that the respondent indicates his/her gender (variable - 0 - male and 1 - female).

ANALYSIS OF RESULTS

The descriptive analysis of the collected data processed by the use of the Statistical Package for Social Sciences (SPSS) revealed that the sample consisted of 1058 respondents, of whom 55.7% (589) were males and 44.3% (469) females with an average age of 35.9 years and a standard deviation of 11.24 years. Of these respondents, 80.4% (851) are professionals and 19.6% (207), students.

SEM requires verification of the assumption of multivariate normality to be tested by multivariate kurtosis index PK Mardia processed with the software LISREL. According to Garson (1998) and Hattie (1997), values less than 3.0 for this statistic indicate that the assumption of multivariate normality is not violated.
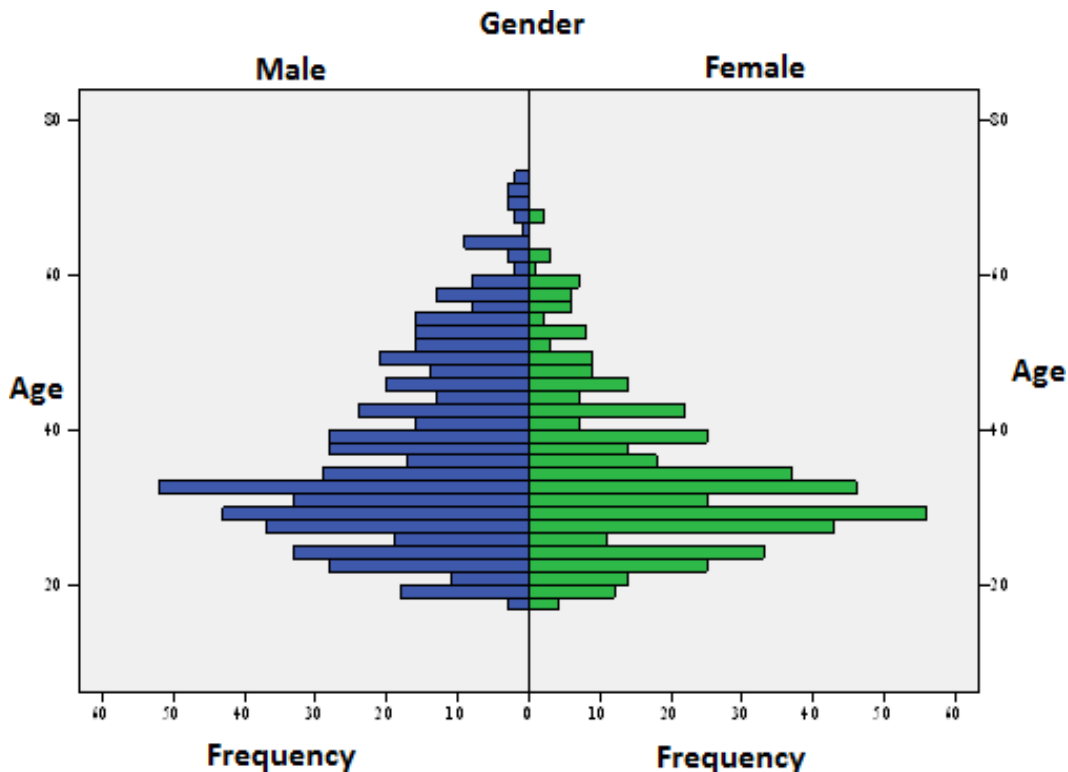
The test of multivariate normality of the data resulted in statistical multivariate kurtosis PK Normalized Mardia (PK = 105.37, sig = 0.000). As expected, the distribution does not present multivariate normality since the data collected are derived from ordinal scales (as a research tool).

Regarding the age distribution of respondents, 65.1%

Table 2. Composition of the sample by age.

	Frequency	Proportion
Aged between 18 and 28 years	291	27.5
Aged between 29 and 38 years	398	37.6
Aged between 39 and 48 years	199	18.8
Aged between 49 and 58 years	124	11.7
Aged from 59 years	46	4.3

Source: designed by the author, 2014.

Figure 1. Distribution of age by gender. Source: designed by the author, 2014.

of respondents were aged less than 38 (Table 2). The youngest respondents in this research were 18 years old (7 individuals) and the eldest were 72 years old (2 subjects). The test of multivariate normality of the data resulted in statistical multivariate kurtosis PK Normalized Mardia (PK = 81.01, sig = 0.000), so the distribution does not present multivariate normality.

When considered by gender, the average age of women (average = 34.14, standard deviation = 0.458) is lower than that of men (average = 37.41, standard deviation = 0.494) and frequency distributions are asymmetrically positive for both genders, as shown in the histogram in Figure 1.

The processing of the full model - involving the dependency relationships between the constructs proposed in the study and among observable indicators and dimensions of these constructs with multivariate statistical SEM-PLS technique of bootstrapping a sample of 1058 respondents and 500 repetitions – resulted in statistics "t" of students in Figure 2.

As seen in Figure 2, the Student "t" statistics generated in bootstrapping for load measurement model and structural model have values above the critical limit of 1.96. These results show that all loads differ significantly from zero at a significance level of 5%, which combined with the magnitude of the loads obtained, demonstrate the convergent validity of the measurement model.

In Table 3 are organized correlation measures, averages and standard deviations of the non- standardized scores, the roots of the Average of Variance Extracted (AVE) and composite reliability of the constructs and dimensions of the research.
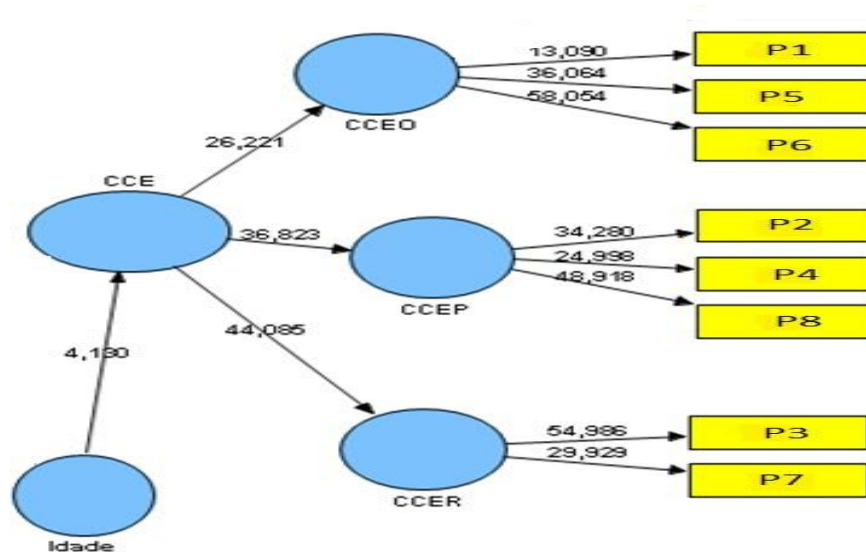
Figure 2. Model Bootstrapping with SEM-PLS complete. Source: designed by the author, 2014.

Table 3. Correlation matrix between the dimensions and constructs of the research.

Panel A - Measurements of the latent variables of 1st order			
	EBC O	EBC P	EBC R
EBC O	0,69048		
EBC P	0,227942	0,74283	
EBC R	0,401838	0,449581	0,79172
C.C.	0,780287	0,786464	0,770064
Average	3,946743	4,257587	4,064559
SD	0,651343	0,629933	0,677396

Panel B - Measurements of latent variables 2nd order		
	EBC	Age
EBC	0,7556454	
Age	0,194336	1
C. C	0,792158	1
Average	4,09455288	35,96125
SD	0,48834237	11,23632

Source: designed by the author, 2014.

The data in Table 3 show that all measures of Composite Reliability (CR) are above the level of 0.70. Thus, the full model also meets internal consistency and reliability for predicting the proposed relationships. There are still latent variables that both first order dimensions and second order constructs have, showing roots of strokes higher than the correlations between them. Therefore, the full model also meets discriminant validity.

With the intention of classifying entrepreneurial behavioral characteristics in participants surveyed, the results are presented in Tables 4 (by gender) and 5 (for age).

The results in Table 4 indicate that men have a higher average regarding EBC, while women have higher averages in EBC Planning and Realization. This empirical evidence corroborates the findings of Sharma and Laroiya (2008) and Collins (2007), who also found in men a greater inclination to EBC Power and that women are more fitting in EBC Realization.

Based on the results in Table 5, one may notice that all Entrepreneurial Behavior Characteristics (Power, Planning

Table 4. EBC by genre.

		Male	Female
EBC O	Average	3,9167	3,8828
	Standard deviation	0,5654	0,7110
EBC P	Average	4,2404	4,2549
	Standard deviation	0,6552	0,5875
EBC R	Average	4,0340	4,0605
	Standard deviation	0,6760	0,6746

Source: designed by the author, 2014.

Table 5. EBC by ag111e.

		18-28 yrs	29-38 yrs	39- 48 yrs	49- 58 yrs	From 59 yrs
EBC O	Average	3,7734	3,9306	3,9369	4,0041	4,0389
	Standard Deviation	0,7342	0,6063	0,6044	0,4969	0,5111
EBC P	Average	4,1326	4,2348	4,2475	4,4607	4,4963
	Standard Deviation	0,6270	0,6692	0,6091	0,4587	0,4852
EBC R	Average	3,8945	4,0492	4,1111	4,1829	4,3222
	Standard Deviation	0,7108	0,6459	0,6817	0,6014	0,6670

Source: designed by the author, 2014.

and Implementation) are stimulated by the increasing age of the respondents; the higher the age of respondents, the higher the averages of the EBC. One can also see that the standard deviations tend to decrease with increasing age; in other words, a lower dispersion around the average is presented in more mature respondents.

The proposed hypothesis H1 was the higher the age of respondents, the lower their EBC level. With this purpose, the following hypotheses were formulated, null and alternative, respectively:

$H1_0$: There is no relationship between age and EBC;
$H1_1$: There is a relationship between age and EBC.

We observed that age significantly influences Entrepreneurial Behavior Characteristics - EBC ($\beta 1$ = 0.101, t = 4.130, sig = 0.000); however, the explanation of the variability of this construct by age was low and equal to 1.02%.

Despite the low explanatory power through the analysis of these data, it could be inferred that the variable age had a significant effect on the responses (EBC), since the p value was less than the significance level (0.000); therefore the null hypothesis (H10) was rejected.

This result is aligned with studies performed by Devolder (1988), Bradley (1991), Lamb (1998), Cavallini and Pagnin (2002), ReimersHild (2005), Rai (2008), Jha (2010) and Bonura (2011). The hypothesis 1 showed results in the opposite direction hypothesized. Therefore, the first hypothesis of this study is empirically demonstrated as follows: "the higher the age of the respondent, the greater his/her level of entrepreneurial behavioral characteristics".

Hypothesis H2 was formulated to examine whether the gender of the respondent can influence their EBC level. With this purpose, the following hypotheses were formulated:

$H2_0$: There is no relationship between gender and EBC;
$H2_1$: There is a relationship between gender and EBC.

In order to test these hypotheses, we carried out a test of independent samples, as shown in Table 6.

Before the test for equality of means, we performed a preliminary examination of the scores generated in the processing of SEM-PLS, according to gender and their entrepreneurial characteristics. The distribution of these scores according to the average and standard deviations are shown in Table 6.

The figures indicate that males present levels of Entrepreneurial Behavior Characteristics higher than women; however, it is necessary to verify whether these differences are significant at the 5% level. The analysis of the normal score "EBC" presented measures equal to

Table 6. Gender scores.

		Gender	
		Male	**Female**
EBC	Average	0,0244	-0,0306
	Standard Deviation	0,0388	0,0494

Source: designed by the author, 2014.

Table 7. Average test for independent samples.

95% confidence interval of difference							
Gender	**t**	**df**	**Sig. (bi-caudal)**	**Average**	**Standard deviation**	**Superior**	**Inferior**
EBC (Male)	0,527	1050	0,599	0,03136	0,05955	-0,08548	0,14821

Source: designed by the author, 2014.

Kolmogorov-Smirnov (KS = 1.316, sig = 0.063) allowing to accept it as normal distribution.

The processing results of the test for equality of means "t" of Students - for independent samples with the scores "EBC" according to gender - are summarized in Table 7.

As can be seen in Table 7, the average differences for EBC according to gender were not significant (EBC = 0.03136; sig = 0.599). Therefore, at the 5% level of significance, there are no relevant differences between EBC and gender of the respondent. Thus, the second hypothesis was not supported by research data (H20 is accepted).

Conclusion

This study presented a research problem whose purpose was to explain the relationship between age and gender of entrepreneurs and Business Administration students and the behavioral characteristics of these individuals. This study also sought to examine the elements that could demonstrate this relationship.

Giving attention to the research problem, the proposed overall goal and the methodology conducted in this study, empirical tests conducted confirmed the hypothesis of the effect of age of respondents on EBC. However, the possibility of influence of gender on EBC was not supported. Therefore, one could observe that age is only one factor that had a positive impact on entrepreneurial characteristics, at least in the context covered by this research.

These results, therefore, may contribute to the education of students and updating professional entrepreneurs, since these findings indicate specific paths of the limitations and biases concerning entrepreneurial profiles. By presenting how age and gender can influence entrepreneurial characteristics, the study not only remarks that professional and technical aspects are linked to entrepreneurial activity, but also aspects involving personal characteristics. With these findings, we believe that teaching strategies and continuing education for entrepreneurial students and professionals can take into account different perspectives in order to adapt to each profile involved.

We hope that this research has contributed to the knowledge of the research fields of entrepreneurship, especially for lines of research devoted to studying entrepreneurship under the bias of the psychological school.

We can point out some important limitations of this study, which can be seen as opportunities for future research. The survey sample was restricted to the city of Salvador, Bahia, and students and professionals of directors. Future studies could apply the instrument employed in other regional contexts to analyze the behavior of the constructs in the context of their research and corroborate or refute our findings.

Conflict of Interests

The authors have not declared any conflict of interests.

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