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Relation between Locus of Control and Resilience aaccording to the social characteristics of Accounting students

Abstract

Objective: Analyze the relation between the Internal and External Locus of Control and resilience according to the social characteristics of Accounting students.

Method: The data were collected by means of a survey, using Levenson's (1973) for Locus of Control and Pesce, Assis, Avanci, Santos and Malaquias' (2005) scale for resilience, respectively. The sample consists of 449 Accounting students from all regions of Brazil, with 31.63% men and 68.37% women. For the data analysis, multiple linear regression was applied and Student's T-test, the ANOVA test and Cronbach's alpha coefficient were calculated.

Results: The results demonstrate that Accounting students in general have high levels of resilience and Internal Locus of Control, granting them a profile of determined, self-confident and persevering people when confronted with the difficulties of the undergraduate Accountancy education process. Differences in Locus of Control and resilience levels were found between female and male individuals, students from private, public and public-private institutions and according to marital status, in that the highest levels of Internal Locus of Control were found in male individuals and higher resilience in female persons. No significant difference in resilience was found according to the students' marital status, but a higher perceived External Locus of Control was found in single students. Finally, both the External Locus of Control and resilience were higher from students from public-private institutions.

Contributions: The study contributes by identifying the resilience and Locus of Control levels of Accountancy students according to gender, marital status, or even according to the type of institution. These factors from the psychological and social learning theory permit understanding the criteria that most affect aspects such as continuation in the course.

Key Words: Locus of Control; Resilience; Accounting Students.

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1. Introduction

Traditional accounting is commonly associated with the responsibility for preparing and analyzing financial statements. Several other information types exist in the scope of Accounting though, not necessarily of a financial nature, which should also be considered and analyzed in order to provide the best assistance to information users. In this context, Behavioral Accounting research exists, which considers the dimension of human behavior applied to Accounting, which encompasses a set of relevant information which the professionals who elaborate the financial statements have to (or should) analyze (Lucena, Fernandes & Silva, 2011).

Accounting, as an integral part of applied social sciences, influences the decision-making processes. Hence, it also uses behavioral principles from psychology to better understand accounting information users. Specifically in relation to Behavioral Accounting, being an area that contemplates different perspectives, authors such as Siegel and Ramanauskas-Marconi (1989) and Lucena et al. (2011) segregate the research in three areas: i) construction and use of the accounting system; (ii) the effect of the accounting system on human behavior; iii) forecasting methods and strategies adopted by accounting users to change human behavior.

In the context of the second perspective (effect of the accounting system on human behavior), Farag and Elias (2016) report that it is important to understand Accounting students because they represent the population of potential accountants. These students are preparing to be the next generation of accountants. Thus, choosing a career in Accounting should be the product of individual reflection and perception of one's characteristics and personality, in view of the environment in which the profession they chose will be executed (Magalhaes, 2005), although there are other underlying reasons.

In addition, Accounting itself has been considered as a stressful occupation, although not all stress is bad (Selye, 1974), and environmental conditions such as workload, time pressure, and conflicting duties in the field of Accounting have been consistent with this concept of stress (Hasin & Omar, 2007). Therefore, the existence of a relation between the choice of the profession and self-knowledge may be favorable, so that the individual opts for careers that best represent his/her personal identity, interests, abilities, and personality characteristics (Magalhães, 2005).

In this way, some behavioral variables, such as the Locus of Control and Resilience, have been the focus of research in several areas of knowledge. Unlike countries in Europe and North America, however, the issue has been little investigated in Brazil, especially when applied to professionals in the social sciences. In this sense, the research on locus of control and resilience in Brazil is still incipient (Cowen, Wyman & Work, 1996; Yunes, 2003).

The Locus of Control corresponds to the perception of control over life, determined by the individual, being a pattern of orientation (Rodrigues, 2007). Thus, there are two parameters for the Locus of Control: internal and external. People with an Internal Locus of Control attribute responsibility for what happens to themselves, they feel responsible for controlling most of the situations they face and believe that they can interfere in the results of these situations (Dela Coleta, 1987; Tavares, 2006). People with external Locus of Control, on the other hand, tend to attribute responsibility for what happens to others or to what is external, they do not feel able to control the situations they go through (Callado et al., 2006).

In the research, in turn, it is assumed that resilience consists in the human capacity to face and overcome experiences of adversity, allowing the individual to emerge strengthened or transformed (Yunes, Szymanski, 2001; Minello & Scherer, 2014). According to Pesce, Assis, Santos, and Oliveira (2004), resilience can be understood as the set of social and intrapsychic processes that permit the development of a healthy life, even when living in an environment that is not healthy. Studies and research on human resilience seek to understand how some people have the capacity to develop and overcome better than others, even when experiencing the same situations of adversity, and these differences can also derive from the environment of the undergraduate program.

Considering the above, and considering that there is a research gap on the theme in Accounting, the following research question is formulated: **What is the relationship of the internal and external Locus of Control with resilience according to the social characteristics of the Accounting students?** Based on the research question, the objective of the study is to analyze the relationship between the Internal and External Loci of Control and resilience according to the social characteristics of Accounting students.

Therefore, a survey was carried out, using the scales of Levenson (1973) and Pesce, Assis, Avanci, Santos & Malaquias (2005) for Locus of Control and resilience, respectively. The final sample comprises 449 accounting students. Data analysis was performed using multiple linear regression, Student's T-test, ANOVA and Cronbach's alpha. The results show that Accounting students, in general, have high levels of resilience, as well as of internal locus of control, which grants them a profile of determined, self-confident and perseverant in view of the difficulties during undergraduate Accountancy education. There were also higher levels of Internal Locus of Control in male students and greater resilience for females. Both the External Locus of Control and resilience were greater for students from public-private institutions.

This research differs from the others as resilience is little studied in this scenario, as a central theme or its connections, being usually related to the operational part (Cowen; Wyman; Work, 1996; Angst, 2013). In addition, authors from the social sciences, such as Yunes and Szymansky (2001); Barreira and Nakamura, (2006); Angst (2013) study the Locus of Control but as an isolated theme. In this way, studying these relations together and also considering the social characteristics permits identifying the profiles of how the students react to the situations according to their level of Locus of Control and resilience. These findings can help institutions and individuals interested in preparing individuals for the process they are going through, minimizing the costs of professional traumas that could develop as a result of possible failures in the training process.

The research also complements the study by Damascena, França, and Silva (2016), which only investigated the relationship of Loci of Control and resilience with accounting professionals, researching academics, and the subdivisions of Locus of Control and resilience. This study, therefore, differs by studying the relationship of (internal, chance and powerful others) Locus of Control with resilience (actions and values, independence and determination, and self-confidence and adaptability to change) according to the social characteristics, not identified earlier.

Studying the Locus of Control is important because it helps to understand the characteristics of individuals with Internal and External Loci of Control, and the type of Locus of Control impacts the resistance to coercion, influences the ability to accept challenges and provides greater persistence in the efforts to obtain results (Rodrigues, 2007), which is indeed necessary for individuals in academic environments. In addition, as presented by Rotter's (1966) theory of social learning, it is necessary to consider the subject's interaction with the environment, personality variables, and individual characteristics.

As for the contribution to research on resilience, there is increasing research interest due to the need to invest in problem prevention and mental health promotion of individuals in whatever areas of action (Pesce et al., 2004). In the field of education, resilience plays an important role because it favors the development of social, academic, and personal skills that allow the student to overcome adversities and to achieve academic, professional, and personal success (Ruter, 1987; Díaz, Giraldo, & Buitrago, 2011).

In addition to all the theoretical contributions in terms of specifically knowing the effects of variables, the understanding of this set of variables offers practical contributions to educational institutions. These can use the results of their students according to gender, marital status, or even the type of institution, related to the level of resilience and Locus of Control, factors from the theory of Psychological and Social Learning (Lefcourt, 1976). These relationships make it possible to understand the criteria that most affect aspects such as the continuation in the course.

In this sense, it is suggested that the discussion about these criteria is of paramount importance for higher education institutions that have witnessed the frequent problem of course dropout year after year and are still unable to solve and fully understand it. The analysis of individual variables permits outlining profiles that can be trained and understood in order to maximize the promotion of academic potential.

This study also contributes to the literature on Accounting education because it emphasizes the relationships between specific variables of the students in the course, helps to identify personality characteristics in a population of future accountants, and broadens discussions on research that helps the students, aiming to make them successful in the future.

2. Theoretical Background

To support this study, the theoretical framework includes the discussion of Locus of Control, presenting the concepts and appointing relations between the theme and the social sciences and Accounting. The same discussion and development take place for resilience research.

2.1 Locus of Control

Differently from the study by Damascena, França, and Silva (2016), which aimed to analyze the relationships and characteristics between the Locus of Control and resilience of accounting professionals, considering their position in relation to the decisions of life and their level of resilience, this study focused on Accounting students. Taking an undergraduate course is not a simple task and, according to Hasin and Omar (2007), the course in Accounting requires commitment and should prepare students to act in a stressful profession. Therefore, it is important to know and understand the Locus of Control and resilience.

Rotter (1966) was one of the first authors to describe the concept of Locus of Control. According to this author, the Locus of Control refers to the existing expectation of our behaviors in relation to contingencies. According to the author, the construct of Locus of Control consists of a bipolar dimension: on one side of the pole, there is the dimension of internality and, on the other, the dimension of externality. According to this construct, people whose Locus of Control is Internal (internality) believe that the attainment of their goals depends on their efforts and skills. In turn, people with External Locus of Control (externality) believe that the attainment of their goals depends on any factor other than themselves, such as luck, faith, fate, chance or coincidence.

For Dela Coleta (1987), Locus of Control is a variable that seeks to explain a characteristic related to the people's perception of the source of control of the events they are involved in. According to the author, individuals can perceive themselves in control over these events or as being controlled by external factors. Callado et al. (2006) contribute to the discussions about the theme by arguing that personality variables and characteristics are considered individually, and these do not explain behavior, as the interaction of the subject with the environment needs to be considered and, thus, each subject will demonstrate whether it is internal or external. For Rodrigues (2007), Locus of Control is the perception of control over one's life, that is, a pattern of orientation. In the social sciences, authors such as Yunes and Szymansky (2001); Barreira and Nakamura, (2006); Angst (2013) and Damascena, França, and Silva (2016) have focused on the theme.

Due to the multidimensionality of the Locus of Control construct, several scales emerged to measure these factors and, consequently, the number of related studies increased. One of the main contributions proposed came from Hanna Levenson, who divided the externality proposed by Rotter (1966) into two, in that her version of externality is divided between chance and powerful others; the external in this case should not represent something necessarily bad or undesirable (Da Coleta, 1987). According to Dela Coleta (1987), Levenson's scale (1973) was theoretically similar to that of Rotter (1966), but not empirically.

Adapted to the Brazilian context by Dela Coleta (1987) and validated by Tamayo (2012), Levenson's scale (1973) determines that the people who deposit the control in powerful people constitute the defensive external ones, while people who perceive destiny, luck, or chance as sources of control constitute the authentic external individuals. And, finally, people who do not believe in the power of other people, nor in chance, destiny or luck, but in themselves would be the authentic internal individuals.

In relation to the Locus of Control studies, overall, one can say that they describe several characteristics attributed to internal or externally oriented subjects. According to these studies, people with an internal locus are more resistant to coercion, engage more directly in activities to achieve their goals, accept the challenges more, are more persistent and hardworking for results, resistant to social influence, choose what situations to submit to (Dela Coleta, 1982) -and are associated with greater ambition, motivation, success in the professional career, learning in the workplace and organizational performance (Macia & Camargo, 2010).

While externals manifest more emotions, they suffer more affective influence, do not take direct responsibility for goals and are more likely to undergo persuasive influence (Dela Coleta, 1982), besides being associated with more effective leaders. Individuals who hold the belief that their success depends more on external than internal factors often present greater consideration towards the people they manage.

In view of the above, we consider that the Loci of Control is not a new concept (Macia & Camargo, 2010) for the research. Studies in different disciplines, such as Psychology, Administration, Human Resources and Entrepreneurship, have already conducted research using the construct. In relation to these studies, one can notice that the concept has undergone a certain evolution in the development of different measures since its initial presentation, although there remains a research gap in certain areas, such as Accounting.

Accounting is rooted in the applied social sciences and, in dealing with the decision-making processes, it uses behavioral principles deriving from Psychology (Lucena et al., 2011). Starting from this assumption, the opportunity of research in Behavioral Accounting arises, involving Locus of Control. According to MacDonald (1973), the development of the Locus of Control can be affected by the quantity and quality of environmental interactions during childhood, regarding the amount of control the individuals feel they obtain. This concept is also applicable to the explanation of resilience. Therefore, the next section discusses resilience which, in combination with locus, are the variables studied in this research.

2.2 Resilience

Resilience, unlike the Locus of Control, is a recent theme that is under construction, discussion, and debate. Resilience refers to the set of social and intrapsychic processes that enable the healthy development of the individual, even when experiencing unfavorable experiences (Pesce et al., 2004). According to Oliveira, Reis, Zanelato, and Neme (2008), the theme has been studied in different areas of knowledge. Before being properly used in the field of human and social sciences, the term was suggested by the exact sciences to refer to the elastic capacity of certain materials.

In recent years, however, resilience has come to appear more frequently in the literature. Due to that attention, research on this topic has grown and most of these studies use definitions with an operational focus (Cowen, Wyman; Work, 1996). The growing interest in the concept of resilience in the social and human sciences reflects the need for investment in problem prevention and promotion of mental health in humans (Pesce et al., 2004).

The contemporary health promotion movement has revealed resilience as an important concept in this area of knowledge (Pesce et al., 2004). Studies and research on human resilience seek to understand how some people acquire greater ability to overcome than others, despite experiencing similar situations of adversity (Minello & Scherer, 2014). In this sense, resilience is not an inborn attribute, nor acquired in the course of development, but an interactive process between individuals and their environment (Rutter, 2012).

In general, some definitions of resilience have been shaped over time. For Yunes (2003), resilience refers to the ability to overcome adversity, which does not mean that there are no changes in individuals, as the terms invulnerability and invincibility suggest. According to Fortes, Portuguez, and Argimon (2009), resilience is defined as the ability of the individual or family to face adversities, be transformed by them and overcome them.

Several definitions of resilience are identified. Individuals and groups differ in their sensitivities and vulnerabilities to certain types of events, as well as in their interpretations and reactions, and this seems to stimulate the development of research to measure resilience. Studies on resilience as a central theme or associated with other aspects are few and characterize the gap for the development of this research because, according to Angst (2013), the term has not been applied in the social sciences.

In this sense, in the analysis of the approaches and discoveries about the concept of resilience, Grotberg (2003) identified eight aspects that represent the findings, among which the following stand out: the connection of developmental stages and human growth, including age differences and gender, their possible measurement, role in mental health and quality of life. Prevention and promotion are some of the concepts of resilience, which is a process: there are resilience factors, resilient behaviors, and resilient outcomes.

In the context of work, resilience explains the mobilization of psychosocial resources to cope with the ruptures and tension situations characteristic of modernity (Rogge & Lourenço, 2015). It is noteworthy that there is no consensus on the number of negative life events required to affect individuals' resilience (Pesce et al., 2004). The different individual levels of stress tolerance also vary according to the period of life in which the event occurs and as the situation is faced: a person is disturbed by small changes, some are affected by larger events, others when the exposure to the event is more prolonged, or some can even reach their tolerance limit only when small stressful day-to-day events accumulate (Savoia, 1999).

According to Díaz et al. (2011), is the combination of nature, quantity, and intensity of risk factors that defines the context of adversity required for resilience. In the field of education, resilience plays an important role because, through its development, it is possible to foster the development of social, academic, and personal skills that allow the student to overcome adversity and succeed in life (Rutter, 1987). In this sense, and in order to broaden the studies on academic performance, including the aspects of drop-out, the research focuses on the discussion of the Locus of Control aspects, personal characteristics, and resilience, in order to identify Accountancy students' perception of these aspects.

2.3 Social characteristics and hypothesis development

With each passing year, new opportunities are gained to reflect on the scientific events that determine our knowledge on how to better understand all people. Thus, the importance of promoting the potential of all has gained focus and, consequently, has emphasized the importance of the concept of resilience (Infante, 2005). In the field of education, resilience plays an important role because, through promotion, it can foster the development of social, academic, and personal skills that enable the student to overcome adversity and succeed in life (Ruter, 1987).

Research on student resilience, especially considering higher education, has been scarce though. Although some attempts have focused on academic performance and seek to analyze it, its multidimensionality has been the focus, seeking to discuss family, social, and educational variables that may affect its condition, but little evidence is available about social characteristics (Díaz, Giraldo & Buitrago, 2011). This indicates that there are few studies that aim to understand academic performance in further depth.

The problem is established when it is identified that poor performance is one of the main and most common problems at universities, which can lead the student to drop out of the course (Díaz, Giraldo & Buitrago, 2011), because drop out from undergraduate programs is a recurrent concern in any higher education institution (HEI) (Cunha, Nascimento & Durso, 2014). Although the socioeconomic and cultural characteristics differ among different (public or private) institutions, some studies point to similar characteristics of this phenomenon; one of them refers to the individual perceptions of each individual.

In order to help and reduce this gap, this research uses factors called social characteristics of students, such as sex, marital status, and attending school, which should be analyzed in situations of academic risk, such as the professional frustration that will accompany a lifelong learner for starting and not completing an undergraduate course (Cunha, Nascimento & Durso, 2014). The Locus of Control and resilience interfere in these aspects of interaction with the environment and perception of events in one's life.

The Locus of Control is considered a characteristic deriving from the individuals' perceived command of the events and situations they are submitted to (Dela Coleta, 1987). The perceived distribution of the command may be related to self-command or command by external factors and without the individual ability to change. Resilience, then, is understood as an agglomeration of social and intrapsychic experiences and processes that help the development of the individual, regardless of the origin of the experiences (Pesce et al., 2004).

According to Callado et al., (2006) individual discussions such as personality and characteristics should not be investigated alone, because they may be due to interactions with the environment they are immersed in and, thus, these command characteristics will be conceived as internal or external/submitted. The study of the environment individuals are inserted in is of great importance because it influences their behavior and contributes to the formation of characteristics and personality. In this sense, Minello and Scherer (2014) affirm that, even when experiencing similar experiences of difficulties and misfortunes, there are individuals who acquire higher skills and ability to overcome than others, and this can be studied through research on resilience.

Thus, resilience is not characterized as ready, or possessed by a certain individual, but rather as constructed/developed according to the interactive process between this individuals and his/her environment (Rutter, 2012). Therefore, the Locus of Control being understood as a pattern of the individual, who acts by recognizing the reasons for the events in his/her life (Rodrigues, 2007) and the resilience to the capacity to face adversities, to undergo changes and to overcome them (Fortes, Portuguez & Argimon, 2009), a relation between the themes is assumed as,depending on how the individual perceives the control of the situations experienced in his/her life, (s)he will react differently and, therefore, his/her resilience and ability to overcome will differ.

The Internal Locus of Control (ILC), Chance Locus of Control (CLC) and Powerful Others Locus of Control (PLC) being different perceptions of who is responsible for the adverse situations the individual faces on a daily basis, it is emphasized that these different perceptions will impact resilience differently, as the judgments and suffering deriving from undesirable and unfortunate situations allow the individuals to recognize, develop, and mobilize resources and abilities in themselves they may never have noticed before (Calvo & Garcia, 2010). This is confirmed by Rodrigues (2007), who states that, in addition to influencing the strategies of life, the Locus of Control also influences how people behave and plan their actions based on their actions and results.

Furthermore, in the study involving Accounting professionals, Damascena et al. (2016) find a direct and significant relationship between Locus of Control and resilience.

- **H_1:** Accounting students' resilience is related with the Locus of Control.
- **H_2:** Accounting students' social characteristics distinguish the resilience and Locus of Control.

3. Methodological Procedures

To meet the objective of analyzing the relationship of the Internal and External Control Loci with resilience according to the social characteristics of Accounting students, a quantitative study was performed with data collection by means of a questionnaire. The research population comprises Accountancy students of all phases, and regions of Brazil, who answered the survey that was sent individually by e-mail. The population data were obtained by surveying the public and private higher education institutions that offered the Accountancy course in their institution. The questionnaire was forwarded by a google docs link, resulting in 449 responses that compose the research sample.

The instrument used for the data collection was a questionnaire composed of three stages. The first stage corresponds to the demographic data of the respondents, which in this research are called social data. The second stage corresponds to the Control Locus scale, using the version by Levenson (1973), which measures the Control Locus in three parts: ILC - Internal Locus of Control, CLC - Chance Locus of Control and PLC - Powerful Others Locus of Control. Finally, the last step corresponds to the resilience scale of Pesce, Assis, Avanci, Santos & Malaquias (2005), which classifies resilience into three distinct factors, in this case, factors I, II and III. Both scales are discussed in the next section. The construct referring to the questionnaire is presented in Table 1.

Table 1
Construct of the Questionnaire

Variables	Description	Block	Questions
Social Characteristics	-	1	1 to 10
Control Locus	ILC	2	1. 4. 5. 9. 18. 19. 21. 23
	CLC		2. 6. 7. 10. 12. 14. 16. 24
	PLC		3. 8. 11. 13. 15. 17. 20. 22
Resilience	Factor I	3	1. 2. 6. 8. 10. 12. 14. 16. 18. 19. 21. 23. 24. 25
	Factor II		5. 7. 9. 11. 13. 22
	Factor III		3. 4. 15. 17. 20

Source: Research data.

After the data collection, we verified the statistical methods to be used, choosing descriptive statistics, multiple linear regression, Student's T-test, ANOVA test and Cronbach's alpha coefficient for data reliability analysis. Descriptive statistics are used to understand the behavior of a variable in the dataset under analysis1. Student's T-test and ANOVA were parametric tests for comparison of means and were used to distinguish the mean resilience and Control Locus scores according to the characteristics of the Accounting students. The T-test compares means in a binary form and, according to Hair, Black, Babin, Anderson, and Tatham (2009), is used for samples when the population variance is not known and if the objective is to test whether a given mean corresponds to a specific value or not.

The ANOVA test compares the means of larger samples and is considered an extension of the T-test. It is applied when testing if the population means are equal (Hair et al., 2009). For the null hypothesis that the data are equal to be rejected, there must be at least one group of means different from the others. In ANOVA, it is assumed that each group comes from a normal distribution with averages and with homogeneous variance. The normality of the data was assumed according to the central limit theorem, due to the sample size.

For the development of the research, multiple linear regressions were also performed. According to Fávero, Belfiore, Silva, and Chan (2009), linear regression aims to study the relationship between two or more explanatory variables, presenting a relation with a metric dependent variable. The equations that demonstrate the regression models used in this study are as follows, starting with the multiple linear regression given by equation (1).

$$FIR = \beta_0 + \beta_1 ILC + \beta_2 CLC + \beta_3 PLC + \varepsilon \quad (1)$$
$$FIIR = \beta_0 + \beta_1 ILC + \beta_2 CLC + \beta_3 PLC + \varepsilon \quad (2)$$
$$FIII = R\beta_0 + \beta_1 ILC + \beta_2 CLC + \beta_3 PLC + \varepsilon \quad (3)$$
$$RESIL = \beta_0 + \beta_1 ILC + \beta_2 CLC + \beta_3 PLC + \varepsilon \quad (4)$$

Where FIR is related to Resilience Factor I, FIIR to Resilience Factor II, RFIII to Resilience Factor III, RESIL refers to Resilience in general, ILC refers to the Internal Locus of Control, CLC refers to the Chance Locus of Control, PLC to the Powerful Others Locus of Control, ε is the random error of the regression and β_0, β_1, β_2 and β_3 are coefficients generated by the regression, which express the sensitivity of the resilience to the independent variables. Finally, the reliability analysis of the data is performed, which permits analyzing the measurement scale used in the research, thus providing information on the relationships between the six individual items of the survey, leading to the validation of the same six traits.

Specifically, descriptive statistics were applied to describe the data used in the research, explaining the percentage of female and male respondents and the mean levels of locus and resilience they presented. The multiple linear regression estimated by the Ordinary Least Squares (OLS) was applied to diagnose the relationship of the Locus of Control with resilience.

Student's t-test was used to test whether there is a difference between the levels of locus of control and resilience between male and female respondents. The ANOVA test, in turn, explores the difference in locus of control and resilience among respondents from public, private, and public-private institutions, and also among single, married, and widowed respondents. Finally, Cronbach's Alpha proves the validity of respondents to the research. The development of the scales used is explained in further detail in the next topic.

3.1 Locus of Control and resilience scales

Rotter (1966) proposed the Locus of Control scale. The author initially developed a theory of social learning in which he argued that the tendency to perform some behavior is partly a function of the expectation that the response will be followed by reinforcement. Rotter (1966) defines Locus of Control as the generalized expectation of someone in his/her ability to control the events that follow his/her actions. A division into two groups was proposed: Internal Locus of Control (ILC) and External Locus of Control (ELC), in which the ILC corresponds to when individuals perceive the results as a consequence of their actions, and the ELC corresponds to the perception of the results as a consequence of external factors.

Levenson (1973), however, in studying Rotter's theory, suggested dividing the externality dimension into two subdimensions: attribution to chance and attribution to powerful others. According to the researcher, externality is not a negative dimension, as believed in Rotter's version. Levenson (1973) suggested the "defensive external", who envisage the possibility of some personal control in the future but determine the consequence by what she named powerful others. And the external individuals, similar to Rotter's proposal (1966), perceive destiny, luck, or chance as the source of control; these constitute the "authentic external" individuals.

Levenson's multidimensional scale (1973) was adapted to the Brazilian context by Dela Coleta (1987) and validated by Tamayo (2012). Overall, in the division proposed by Levenson (1973), there are three types of orientations: 1st Authentic Internal (internality) - people who do not believe in the power of other people, nor in chance, destiny or luck, but in themselves; 2nd Defensive External (powerful) - people who believe in the power of other people, but do not believe in chance or even in themselves; 3rd Authentic External (chance) - people who believe only in the power of chance, destiny or luck, that is, they do not believe in their own power or the power of other people.

The scale consists of 24 items, divided into three subdimensions with eight assertions each: Internal Locus of Control (ILC), Powerful Others Locus of Control (PLC) and Chance Locus of Control (CLC). By reading the items that make up the three subscales of the Multidimensional Locus of Control scale, it is determined that higher scores on the "internality" subscale indicate belief in oneself; higher scores on the "powerful others" subscale indicate belief in powerful people; and higher scores on the "chance" subscale point to belief in chance. The scale is a five-point Likert scale, and the respondents chose between "Strongly Disagree" and "Strongly Agree". As in the study by Damascena et al. (2016), the criterion to define the level of the Locus of Control was used: 4.20 to 5.00 - very high level; 3.40 to 4.19 - high level; 2.60 to 3.39 - neutral level; 1.80 to 2.59 - low level; and 1.00 to 1.79 - very low level. This study also confirmed its reliability by means of Cronbach's alpha, corresponding to 0.790.

As to the resilience scale, Wagnild and Young (1993) performed the first validation, with two factors for analysis. Factor I was called "personal competency" and factor II "acceptance of oneself and life". After the adaptation, Pesce et al. (2005) gave up the original classification, choosing to divide the resilience scale into three factors: Factor I - consisting of 14 assertions that indicate the resolution of actions and values (that give meaning to life, such as friendship, personal accomplishment, satisfaction and meaning of life); Factor II - with six assertions, transmitting the idea of independence and determination; and Factor III - consisting of five assertions, presenting indications of self-confidence and ability to adapt to changes. To calculate the resilience scale scores, the same logic used to analyze the Multidimensional Locus of Control scale was applied. The reliability was also confirmed using Cronbach's alpha, corresponding to 0.856.

Based on the collected data, the analysis procedures were applied, which were based on the variables estimated according to Table 2, which summarizes the research construct.

Table 2
Construct of research variables

Type of Variable	Variable	Measuring
Dependent	FIR	Mean Resilience of factor I questions (Actions and values)
	FIIR	Mean Resilience of factor II questions (Independence and determination)
	FIIIR	Mean Resilience of factor III questions (Selfconfidence and ability to adapt to changes)
Independent	ILC	Mean of Internal Locus of Control questions
	CLC	Mean of Chance Locus of Control questions
	PLC	Mean of Powerful Others Locus of Control questions
	SEX	0 when male and 1 when female
	Marital Status	0 when single; 1 when married and 2 when widowed
	HEI	0 when public; 1 when private and 2 when public/private

Source: elaborated by the authors.

In Table 2, the three resilience factors are explained that comprise the dependent variable and the variables related to the Locus of Control and the social characteristics (dummies), which are the independent variables. SPSS 21.0 was used for the statistical tests analyzed.

4. Data Analysis

In this section, the study results are discussed. The descriptive statistics of the variables are displayed in Table 3.

Table 3
Descriptive statistics of variables used in the research

Variable	Frequency	ILC	CLC	PLC	FIR	FIIR	FIIIR
Male	142	3.66 (0.43)	2.39 (0.66)	2.42 (0.62)	3.92 (0.44)	3.26 (0.45)	3.78 (0.52)
Female	307	3.65 (0.44)	2.44 (0.52)	2.26 (0.56)	4.01 (0.43)	3.34 (0.44)	3.89 (0.47)

Legend: Information about means is displayed alone in the text, while information on the standard deviation is shown in brackets.

Source: Research data

Table 3 shows the Locus of Control, resilience and sex variables. Starting with the analysis of the Locus of Control, both men (3.66) and women (3.65) assign a high level to the Internal Locus of Control (ILC), which determines that the respondents, on average, consider themselves as responsible for the events of their life. In this case, one can identify a student profile as authentic internal. These results are particularly important considering the academic environment, as individuals with Internal Locus of control seek to engage in activities that refer to their ability to achieve their goals, and are more persistent and work harder to achieve results (Dela Coleta, 1982), being associated with greater ambition, motivation, success in the professional career (Macia & Camargo, 2010), which is an important characteristic for undergraduates.

In general, Locus of Control variables were, on average, similar for men and women responding to the survey. Although it is generally known that they have different personalities and characteristics, this does not explain their behavior, as the interaction with the environment (Callado et.al, 2006) needs to be taken into account. It was identified, therefore, that men, in addition to presenting greater internal locus of control, are also the ones that most determine the events of their lives to powerful others (PLC-2.42), rather than considering external factors of chance (CLC- 2.39). Subjects with greater Internal Locus of Control engage more directly in activities to achieve their goals, while external individuals manifest more emotions of non-direct responsibility (Levenson, 1973; Dela Coleta, 1987).

Analyzing the female students, in general, they presented a lower average than the male students for the Internal Locus of Control (ILC), although it is the only locus with a high and considerable score. The Powerful Others (PLC) and Chance Locus of Control (CLC) had low scores, although it can be identified that women, unlike men, first attribute the consequences of life to chance, before indicating powerful others, which determines a difference in the investigated group between the male and female sexes regarding the determination of the powerful others locus of control.

Regarding resilience, men and women, again, presented different scores for each level analyzed, recalling that level I represents the ability to solve actions and values that give meaning to life, such as friendship, personal accomplishment, satisfaction and meaning of life. Level II represents independence and determination and level III self-confidence and ability to adapt to change. As for male students, levels I (3.92) and III (3.78) are considered high. As for level II resilience, this was considered neutral for men. As for female students, the same thing happened; levels I and III were considered high and level II neutral, corresponding to 4.01, 3.89 and 3.34, respectively. Compared to men, women presented higher levels of resilience, indicating that female students are significantly more resilient than male students. Therefore, women have a better ability to overcome than men, even when experiencing similar situations of adversity (Minello & Scherer, 2014).

With higher I and III levels, it is assumed that female students are more accomplished and satisfied with their lives, have greater self-confidence, and are better suited than men in any changes that may occur during the undergraduate years. These findings also determine that male students are resilient, however, with higher levels for factors such as the resolution of actions, personal accomplishment, friendships, self-confidence, and adaptation to change.

Table 4 presents the descriptive statistics for the subdivisions of Locus of Control and Resilience.

Table 4
Subdimensions of Control Locus and Resilience Characteristics

Control Locus				
Variables	**Minimum**	**Maximum**	**Mean**	**Standard Deviation**
ILC	1.000	4.750	3.654	0.440378
PLC	1.000	4.875	2.424	0.569004
CLC	1.000	4.875	2.312	0.578705
Resilience				
FIR	1.000	5.000	3.983	0.432413
FIIR	1.000	4.667	3.315	0.44449
FIIIR	1.000	5.000	3.854	0.487784

Source: Research data

When specifically analyzing the subdimensions of Locus of Control, Table 2 illustrates that the averages presented show that ILC is the locus that best represents the survey respondents because it presents the only high average. As the research sample is characterized by people who attribute responsibility for what happens to themselves, they feel responsible for controlling most of the situations they face and believe that they can interfere in the results of these situations (Dela Coleta, 1987; Callado, Gomes & Tavares, 2006). Meanwhile, the PLC and CLC presented low levels, meaning that the students surveyed do not consider them that much.

As for resilience, levels I and III represented high levels while level II was neutral, which means that, in general, Accountancy students in Brazil are self-reliant and have an inherent level of satisfaction, which makes them face the adversities with more perseverance. This means that the sample is characterized by individuals who give meaning to life, friendship, personal accomplishment, satisfaction, self-confidence and adaptation to change, having the idea of independence and determination to a lesser extent (Pesce et al., 2005).

Table 5 shows the T-tests between the Locus of Control, resilience, and sex, considering the survey respondents' answers, as shown below.

Table 5

T-test between Control Locus, Resilience and Sex

T-test					
Data	Group	Qnt.	Mean	T	Sig.
ILC	0	142	3.664	0.311	0.756
	1	307	3.650		
CLC	0	142	2.391	-0.711	0.442
	1	307	2.440		
PLC	0	142	2.421	2.740	0.006*
	1	307	2.261		
FIR	0	142	3.926	-1.930	0.054***
	1	307	4.010		
FIIR	0	142	3.257	-2.197	0.029**
	1	307	3.341		
FIIIR	0	142	3.780	-1.877	0.061***
	1	307	3.889		

*. The relation is significant at 0.01 (2 ends).
**. The relation is significant at 0.05 (2 ends).
***. The relation is significant at 0.10 (2 ends).
Legend: 0 for male; 1 for female; FIR: Factor I Resilience (actions and values); FIIR: Factor II Resilience (Independence and determination and self-confidence); FIIIR: Factor III Resilience (ability to adapt to changes); ILC: Internal Locus of Control; CLC: Chance Locus of Control; PLC: Powerful Others Locus of Control;

Source: Research data

As for the T-test, this determines the difference found in the groups studied. When analyzing the sex, we identified that it was statistically different (0.006) for the Powerful Others Locus of Control (PLC) group, determining that group 0, which refers to male students, is superior to the female group, that is, men believe more than women that the powerful, that is, more important people than themselves, can be responsible for the consequences of their lives. Thus, men manifest more emotions, suffer more affective influence, do not take direct responsibility for goals and are more likely to undergo persuasive influence (Dela Coleta, 1982).

Regarding resilience, when the T-test was analyzed in relation to sex, all three levels were statistically significant, with Level I and Level II at 5% and Level 3 at 10%, corresponding to 0.054; 0.029 and 0.061, respectively. With these results, it can be argued that, in all groups, men and women have different levels of resilience and, in all cases, women were more resilient than men.

These findings also determine that being more resilient, female students are better able to cope with the pressures and problems that arise as a result of the course they are undertaking, which means that they remain in the undergraduate course and do not give up in view of the difficulties resulting from the undergraduate Accountancy course. Therefore, it is assumed that regardless of the influence the environment exerts on the individual, women have a greater facility and ability to adapt to difficult situations. Therefore, the results of this research corroborate Yunes and Szymanski, (2001) and Minello and Scherer (2014) for finding strong resilience in the findings. In Table 6, the ANOVA tests between Locus of Control, resilience and the social variable called marital status are presented.

Table 6

ANOVA test between Locus, Resilience and Marital Status

ANOVA					
		Df	**Mean Squared**	**F**	**Sig.**
ILC	Intergroup	2	0.057	0.293	0.747
	Intragroup	446	0.195		
CLC	Intergroup	2	2.089	6.613	0.001
	Intragroup	446	0.316		
PLC	Intergroup	2	1.949	5.949	0.003
	Intragroup	446	0.328		
FIR	Intergroup	2	0.006	0.033	0.968
	Intragroup	446	0.188		
FIIR	Intergroup	2	0.135	0.565	0.569
	Intragroup	446	0.238		
FIIIR	Intergroup	2	0.107	0.542	0.582
	Intragroup	446	0.198		

Dependent	**(I)**	**(J)**	**Mean difference (I-J)**	**Sig.**
CLC	0	1	0.186283	**0.003**
		2	0.250758	0.192
	1	0	-0.186283	**0.003**
		2	0.064475	0.897
	2	0	-0.250758	0.192
		1	-0.064475	0.897
PLC	0	1	0.161232	**0.015**
		2	0.331124	**0.063**
	1	0	-0.161232	**0.015**
		2	0.169892	0.482
	2	0	-0.331124	**0.063**
		1	-0.169892	0.482

Legend: 0 – single; 1- married/partner; 2- separated/divorced; 3- widowed

Source: Research data

As for Table 6, the ANOVA test was performed, considering the social variable marital status, in relation to the Locus of Control groups. Both the External Locus of Control (CLC) and the Powerful Others Locus of Control (PLC) were statistically significant, determining a statistical difference in locus of control depending on the student's marital status. Regarding resilience, there was no difference between the groups in statistical terms, which determines that the marital status is not responsible for the difference between the groups. Thus, differences in marital status do not alter the Accounting students' ability to adapt, indicating that students do not have greater or lesser motivation to cope with environmental difficulties, whether they have a partner or not.

Also regarding the differences in the Locus of Control, to identify which of the marital status groups differ in relation to the group of external and powerful others Locus of Control, the Sheffer test was performed. Based on the test results also shown in Table 6, some findings are possible. When looking at the External Locus of Control, group 0, which refers to single persons, was statistically different from group 1, which refers to married individuals or people having a partner. These results indicate that the External Locus of Control (CLC) is most commonly found for single students.

Some studies determine that individuals with an External Locus of Control, who in fact do not believe they can control important aspects of their environment, are more likely to consider the workplace as threatening and stressful (Spector & O'Connell, 1994; Callado, Gomes & Tavares, 2006). These findings are important, considering that single students may consider the HEI environment stressful and may be unable to cope with adverse events deriving from the undergraduate course, sometimes dropping out.

Regarding the Powerful Others Locus of Control (PLC) group, when the Sheffer test was performed, two statistically significant differences were identified, between the unmarried and the married or fixed partner group on the one hand, and between the unmarried and the separated or divorced group on the other. Single people in both cases are the ones who most determine the consequences of their lives depending on powerful others who, according to Levenson (1973), are people who believe in the power of other people, but do not believe in chance or even in themselves. Accordingly, it has been found that single students more strongly determine the events of their lives to powerful people; It is inferred that this fact can be due to single people in the higher education environment being, in short, dependent on someone, such as parents, caregivers, relatives, boy- or girlfriends, roommates, among others and, therefore, do not attribute the consequences only to themselves, and think that others influenced events.

Table 7 shows the ANOVA tests between Locus of Control, resilience and higher education institution.

Table 7

ANOVA test between Locus, Resilience and HEI

ANOVA					
		Df	Mean Squared	F	Sig.
ILC	Intergroup	2	0.218	1.127	0.325
	Intragroup	446	0.194		
CLC	Intergroup	2	0.933	2.907	0.056
	Intragroup	446	0.321		
PLC	Intergroup	2	0.602	0.602	0.166
	Intragroup	446	0.334		
FIR	Intergroup	2	0.660	0.660	0.029
	Intragroup	446	0.185		
FIIR	Intergroup	2	0.585	0.585	0.085
	Intragroup	446	0.236		
FIIIR	Intergroup	2	1.037	1.037	0.005
	Intragroup	446	0.194		
Dependent		**(I)**	**(J)**	**Mean difference (I-J)**	**Sig.**
CLC		0	1	0.039620	0.828
			2	0.533929	**0.056**
		1	0	-0.039620	0.828
			2	0.494309	**0.075**
		2	0	-0.533929	**0.056**
			1	-0.494309	**0.075**
FIIR		0	1	-0.074181	0.334
			2	0.431667	**0.044**
		1	0	0.074181	0.334
			2	0.505848	**0.011**
		2	0	-0.431667	**0.044**
			1	-0.505848	**0.011**
FIIIR		0	1	0.025029	0.903
			2	0.422857	**0.085**
		1	0	-0.025029	0.903
			2	0.397828	0.102
		2	0	-0.422857	**0.085**
			1	-0.397828	0.102

Legend: 0 – Public; 1 – Private; 2- Public-Private

Source: research data

As for Table 5, the ANOVA test was performed considering the HEI variable, whether public, private or mixed (public-private) in relation to the Locus of Control and resilience groups. As for the Locus of Control, it is identified that only the External Locus of Control (CLC) was statistically significant, determining that, for this variable, there are differences depending on which HEI the student belongs to. Therefore, it was identified that at the 5% level, the locus of control justified by external factors (CLC) is higher in mixed, public-private HEIs, than in public HEIs. In about 10%, a similar result occurs when mixed, public-private and private HEIs are confronted.

Thus, students from mixed institutions have a higher level of External Locus of Control, indicating that these students attribute the events in their daily reality to chance or third parties rather than to themselves. For Dela Coleta (1982), external individuals express their emotions more, receive the actions of the people around them more affectively, do not commit themselves strongly to their responsibilities and suffer greater influence from third parties.

Regarding resilience, the ANOVA test also determined significant differences for levels II and III. Level II resilience is different between academics from both public and private institutions compared to mixed HEIs. For level III resilience, only the public and the mixed were statistically significant, determining a difference between the groups. These findings determine that mixed HEI students have higher levels of resilience, indicating that students from these institutions cope better with situations of adversity. It is inferred that this fact occurs because this student is exposed to the difficulties of these two types of institutions; the financial burden of private HEIs and the supposed higher requirements of public HEIs. These facts may influence student resilience, as Díaz et al. (2011) argue that it is the combination of nature, quantity, and intensity of risk factors that defines the context of adversity needed for resilience.

Table 8 shows the regressions performed with resilience as a general variable in relation to the levels of Locus of Control. Initially, it can be observed that the assumptions for the use of the regression were met, as the tests prove the normality of the data, even if by the large amount of data normality can already be assumed. The same can be proved by the Pesarán-Pesarán, ANOVA, Durbin-Watson, and VIF tests, which meet the requirements and assume the homoscedasticity, linearity, self-correlation, and multicollinearity of the data.

Table 8

Regressions: Resilience and Control Locus

Dependent Variable	Independent Variable	Beta	t-statistic	Sig.	VIF	R^2	Sig. model
FIR	ILC	0.477	11.850	**0.000***	1.017	0.255	0.000
	CLC	0.013	0.311	0.756	1.805		
	PLC	-0.129	-3.244	**0.001***	1.816		
FIRIR	ILC	0.336	7.522	**0.000***	1.017	0.132	0.000
	CLC	0.158	3.508	**0.000***	1.805		
	PLC	-0.115	-2.591	**0.010***	1.816		
FIIIR	ILC	0.465	9.779	**0.000***	1.017	0.182	0.000
	CLC	0.091	1.895	**0.059*****	1.805		
	PLC	-0.040	-0.841	0.401	1.816		
RESIL	ILC	0.440	12.580	**0.000***	1.017	0.269	0.000
	CLC	0.063	1.790	**0.074*****	1.805		
	PLC	-0.108	-3.110	**0.002***	1.816		

Regression Premises		
Premise	**Test**	**Value**
Normality	Kolmogorov-Smirnov	0.453
Homoscedasticity	Pesarán-Pesarán	0.410
Linearity	ANOVA	0.000
Self-Correlation	Durbin-Watson	1.909

*. The relation is significant at level 0.01 (2 ends).
**. The relation is significant at level 0.05 (2 ends).
***. The relation is significant at level 0.10 (2 ends).
Legend: FIR: Factor I Resilience; FIRI: Factor II Resilience ; FIIIR: Factor III Resilience ; RESIL: Overall Resilience; ILC: Internal Locus of Control; CLC: Chance Locus of Control; PLC: Powerful Locus of Control;

Source: research data

According to Table 8, when tested for the relationship of Level I resilience and the three levels of Internal, External, and Powerful Others Locus of Control, the regression results suggest that the Internal (ILC) and the Powerful Others Locus of Control (PLC) were statistically significant, determining that these Locus of Control formats explain Level I resilience, according to this sample of respondent students. As for Level II resilience, all Loci were statistically significant, determining that all Locus of Control forms identified in these students contribute to determining how resilient they are. As for Level III resilience, both the Internal Locus of Control (ILC) and the Powerful Others Locus of Control (PLC) explain this level.

When analyzing resilience in general, this is explained by the Locus of Control found in each student, regardless of what they consider, whether the Internal, External or Powerful Others Loci. These findings are important as behavioral aspects impact the work people do in their respective areas, as well as the aspects pointed out by Rotter (1966) about considering the subject's interaction with the environment, personality variables and individual characteristics, considering that the identification of these perceptions permits the identification of groups and characteristics that represent signs of attention for the institutions so that they can inhibit suffering during the academic education process and ensure improvement as a professional in the future.

Therefore, the research findings indicate that the Locus of Control, which understands the subjects' characteristics and whether they impact resistance to coercion, influence the ability to accept challenges and the propensity for persistence in efforts to obtain results (Rodrigues, 2007) and explains resilience, which is understood as the set of social and intrapsychic processes that enable the development of a healthy life, even when living in a non-healthy environment (Pesce et al., 2004). Particularly in the educational field, studies like this are important considering the need to balance the demands of social, academic and personal skills and overcome adversities to guarantee success in all spheres in the life of a student (Ruter, 1987; Díaz, Giraldo, & Buitrago, 2011).

4.1 Discussion of results

By analyzing each variable individually, a profile could be identified for the Accounting students who served as respondents. In particular, it could be identified that men and women had a high level of Internal Locus of Control. Thus, these academics accept more challenges and are more dedicated to achieving the goals and objectives, as in the case of graduating, despite difficulties during the course. Because they are also more resistant to coercion, these may be the students who have not changed their course.

Even though they did not score as significantly as the Internal Locus of Control, the Chance Locus of Control and the Powerful Others Locus of Control scored differently for men and women. What can be identified based on these differences is that women first attribute the responsibility for the events in their life to external factors, such as luck or God, while men first attribute them to powerful others, that is, people who are more important than themselves, assigning to them the responsibility for determining their results. In the undergraduate setting, this would correspond to female students believing in bad luck, while male students would believe that a low grade would be a consequence of the teacher for example.

When analyzing resilience, which in this study was measured by factors, it was identified that men and women presented high levels for Factor I and Factor III, while the results were neutral for Factor II. These results determine that Accounting students have high levels of resilience, especially women who score higher than men on all factors. As already identified by previous research, there is a difference between the sexes. Factors I and III indicate that, in the life of each, values such as friendships, satisfaction and personal accomplishment are present, as well as self-confidence and ability to adapt to changes, which in the case of Accountancy could be related to frequent changes in legislation, which means that the student always needs to be up to date and seek new knowledge; hence, the student needs to rest on self-confidence and be the professional (s)he desires.

When the social characteristics of marital status were analyzed in the previous section in combination with the students' Locus of Control and student resilience, it was found that the Locus of Control is different for the students, depending on the marital status, but not statistically different regarding resilience. After performing the tests, it could be identified that the External Locus of Control, which refers to chance, is higher for single students. These findings can be justified, as married students tend to have greater responsibilities and feel more responsible for their choices of life, as they already have to make daily decisions within their family environment, making them equally persistent in the course.

The Powerful Others Locus of Control was also statistically different between the unmarried and the married and between the unmarried and the widowed. The single persons again attribute the consequences of their lives to powerful people. The findings determine that single individuals are generally more likely to undergo persuasive influence and suffer more from affective influences, that is, they may be more willing to give up because they feel pressured by another person, whether parents or friends. As discussed in the previous section, you may feel more pressure from the environment, and not know how to deal with stress.

Regarding the variables of HEI, public, private and mixed (public-private) for the Locus of Control, statistical differences were found when referring to the Chance Locus of Control. The findings indicate that students affiliated with mixed educational institutions presented more Chance Locus of Control, without assuming the responsibility for what happens to them. As for resilience, the findings are similar, as students from mixed institutions have different levels of resilience than students from public or private institutions.

Regressions were also calculated to identify whether the locus of control factors explained the resilience of the students surveyed. With the regressions analyzing the factors separately, it could be determined that level I resilience, which refers to things that give meaning to life, is made up of individuals who have Internal Locus of Control and part of the Powerful Others Locus of Control. At level III, the findings are repeated and, at level II, all the locus forms were statistically significant. Thus, it can be concluded that the level of resilience is determined by the individuals' Locus of Control, regardless of whether it is Internal or External. Thus, the research hypotheses were accepted, as shown in Table 9.

Table 9
Acceptance of Hypotheses

Hypothesis	Situation
H1: Accounting students' resilience is related to their control locus.	Not rejected.
H2: Accounting students' social characteristics distinguish their resilience and control locus.	Not rejected.

Source: research data.

Finally, there are unpublished findings that encourage new research to thoroughly understand these environments and that may indicate research possibilities to assist managers, teachers or authorities in the training of personal skills and self-knowledge, so that the individual does not get traumatized, gain resilience and reach higher levels of Internal Locus of Control in the face of difficulties encountered during the Accountancy course.

5. Final Considerations

The objective in this research was to analyze the relation of the Internal and External Locus of Control with resilience, according to the social characteristics of the Accounting students. Thus, the research is characterized as a descriptive and quantitative survey. For the accomplishment of this study, a three-part questionnaire was sent to Accountancy students; the first one referring to demographic data - in this research called "social data"; the second relative to Locus of Control; and, finally, the third on resilience. With the respondents, the survey relied on a sample of 449 students.

The results showed that there are differences between men and women in view of the Locus of Control and resilience. Women have a somewhat lower level of Internal Locus of Control compared to men, although both have high levels. As for resilience, women score the highest at all levels; I, II and III. The differences found also extended to the marital status, with single individuals being the most different regarding the marital status found in the sample. As for HEIs, it has been identified that students from mixed institutions (public-private) presented the highest chance locus of control, not assuming responsibility for what happens to them.

Considering the results found and the discussions presented in this work, it is concluded that Accounting students generally have high levels of resilience, as well as of Internal Locus of Control, which causes them to have a profile of determined, self-confident and persevering individuals in the face of the difficulties during the undergraduate Accountancy course. We also highlight the relationship between resilience and locus of control, as evidenced in the regression, as it was found that the Internal and Chance Locus of Control increase the students' resilience, while the Powerful Others Locus of Control decreases resilience. The findings are also important in the Brazilian scenario because they represent a perspective of limited behavioral accounting research.

As a theoretical contribution, we highlight the research findings regarding the Accounting students, potential future elaborators of the financial statements and research in the area of human behavior, bringing interdisciplinarity to the study between psychology and applied social sciences. This study also aims to open and stimulate new research that understands the environment and the relationships between social and behavioral variables, establishing a path and opportunity for future studies.

As a limitation of this study, we highlight the choice of scales, according to the authors' interpretation, because this choice was intentional. To do so, we suggest new studies like this one or using other variables, aiming to better understand the variables that may actually related to individuals' behavioral factors. It is also suggested to carry out other studies with other Accounting groups, in order to compare the findings with the results obtained from this research.

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