A look at graduate studies: Anxiety and Self-Efficacy in Accounting Sciences Programs

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Abstract

Objective: This study's general objective was to seek evidence and analyze the relationship between anxiety and self-efficacy among students attending graduate programs in Accounting Sciences.

Method: An intersectional survey was performed using the General Self-Efficacy Scale and the State-Trait Anxiety Inventory (IDATE) in a sample comprising 322 students attending any degree-granting Accounting Sciences program in Brazil. A quantitative approach was used to analyze data using correlational statistical tests.

Results: Perceived self-efficacy influences the students' performance, though no distinction was found in self-efficacy levels between genders; hence, perceived self-efficacy is independent of gender. The results also show that the students' anxiety levels are negatively and significantly correlated with self-efficacy. Finally, female graduate students scored significantly higher in anxiety than male students.

Contributions: This study's contribution lies in presenting these variables and the role of self-efficacy as a tool for moderating anxiety. This information can collaborate to design intervention strategies to maximize the academic, scientific, and professional potential of Accounting Sciences graduate programs.

Keywords: Self-Efficacy, Anxiety, Degree-granting programs, Accounting Sciences, IDATE.

1. Introduction

For Cornachione Junior (2004. p. 7). "effective and quality education is supported. in a way. on its faculty." and we can also verify the importance of degree-granting programs to train professors to teach in higher education. Among the programs available. those addressing the accounting topic stand out because:

> Accounting. an essential field of knowledge for training decision-makers at the most varied levels. is the result of the relationship between the unfolding of economic-financial facts and the collection and processing of such facts according to the paradigms of a specific methodology and enhanced by scientific rationality (Iudícibus. Martins. & Carvalho. 2005. p. 8)

Another indicator that shows the importance of degree-granting programs in Accounting is that such programs qualify graduate students to deal with the repercussions of the economic progress in the Accounting field (Peleias. Segreti. Da Silva. & Chirotto. 2007). The reason is that graduate programs are a source of expectations for a better career. The results presented by Cunha. Cornachione Junior. and Martins (2010) corroborate this statement. The authors mentioned above analyzed doctoral alumni from the Accounting Sciences program of a Brazilian university based on the Human Capital Theory and concluded that the effect of having a doctoral degree on income was relevant. in addition to the improvement in professional career caused by one's educational level. the authors also reported academic and professional acknowledgment (Cunha *et al.*. 2010).

Hence. the characteristics of graduate programs promote a different interaction between students and the teaching/learning process. Furthermore. at this educational level. students are required to provide an original contribution to scientific knowledge; hence. individual research to improve scientific knowledge regarding a given subject becomes relevant (Levecque. Anseel. De Beuckelaer. Van der Heyden. & Gisle. 2017).

Therefore. a graduate program is an environment that demands students to attend courses to complete academic trajectories and to provide scientific contributions. In addition. according to Levecque *et al.* (2017). some graduate programs require that knowledge contributions be provided through the publication of papers before a thesis or dissertation defense as a requirement to obtain a degree.

For this reason. the mental health of graduate students has become a significant concern in recent years (Evans. Bira. Gastelum. Weiss. & Vanderford. 2018). Evans *et al*. (2018) concluded that graduate students are six times more likely to experience anxiety and depression than the population in general. Levecque *et al*. (2017) report that 32% of doctoral students are susceptible to developing psychiatric disorders such as anxiety. depression. burnout. or emotional exhaustion. Reis. Miranda. and Freitas (2017) also found that anxiety is a condition that affects students attending Accounting Sciences programs.

These and other studies (Andrade. Gorenstein. Viera Filho. Tung. & Artes. 2001; Beiter *et al*.. 2015; Betz. 1978; Iqbal. Gupta. & Venkatarao. 2018) note that college students may experience anxiety and become pathological in some cases. Anxiety is consciously related to subjectivation. such as threatening situations. and results in apprehension and tension. requiring individuals to adapt to daily demands (Borine. 2011).

Anxiety may be a personality trait or a condition that results from temporary events. Hence. instruments were developed to capture the two aspects of this phenomenon (Borine. 2011). In this sense. one of the instruments most frequently used to measure anxiety is the State-Trait Anxiety Inventory (Keedwell & Snaith. 1996). This self-report instrument allows individuals to report how they feel (through statements measuring anxiety). It measures state anxiety (transitory emotional state) and trait anxiety (how an individual feels most of the time).

Therefore. an academic environment. more specifically that of a graduate program. is an environment that affects both faculty members (Nascimento. 2017) and students. For this reason. Levecque *et al.* (2017) emphasize the importance of studying the impact of the graduate academic environment on students because if students' performance is affected by their mental condition. cognitive instruments can be used to minimize harm (Evans *et al.*. 2018. Alves. Puppin. Nascimento & da Cunha. 2019. Antonelli. dos Santos. Vilhena. & Meurer. 2020). The Self-Efficacy Theory stands out among the instruments used to improve the teaching/learning process (Bandura. 1977).

The formal definition of self-efficacy states that it is the individuals' belief in their ability to control their actions. course of actions. or events affecting their lives. The learning process concerns a belief in one's ability to perform a given task. meet a deadline. or be approved in a given course. etc. (Bandura. 1989). Self-efficacy works on the cognitive processing of anxiety as follows: when an individual is confronted with a given task. s/he experiences some emotional activation. A high level of emotional activation may become anxiety and hinder performance (Nogueira & Mesquita. 1992). However. one's self-efficacy decreases a disproportional emotional activation. decreasing anxiety levels and harmful responses that may result from it (Nogueira & Mesquita. 1992).

The influence of self-efficacy on the cognitive process has been analyzed from different perspectives. such as in the sports context (Martin & Gill. 1991; Moritz. Feltz. Fahrbach. & Mach. 2000). at the workplace (Judge. Jackson. Shaw. Scott. & Rich. 2007; Stajkovic & Luthans. 1998). and within the psychological (Bandura. 2001). and educational spheres (Pajares. 1996). among others. Self-efficacy is a strategy that can decrease anxiety because it positively affects one's affective sense and decrease anxiety levels when an individual faces specific tasks (Medeiros. Loureiro. Linhares. & Marturano. 2000). Nonetheless. although anxiety has been investigated from various points of view. no studies address the relationship between anxiety and self-efficacy in the context of Accounting Sciences graduate programs.

According to the Self-Efficacy Theory. individuals tend to choose activities in which they have some experience. so they feel confident that they will be successful. For this reason. high levels of self-efficacy mitigate the distress caused by anxiety (Bandura. 1977. 1988. 1989. 1997. 2001. 2006). However. in a university environment. students are required to participate in activities they are unfamiliar with and sometimes have no knowledge of at all. Such challenges may be even more significant in the context of a graduate program. considering the level of knowledge disseminated at this educational level (Conselho de Educação Superior. 1965). Therefore. in the face of the challenge to which graduate students are exposed. self-efficacy appears as an essential modulator of anxiety (Serpa. 2012). The reason is that it also works on students' previous. internal or intrinsic motivation. producing a positive mindset. enabling students to alleviate suffering prior to the task. and decreasing anxiety levels (Bandura. 1977. 1988. 1989. 1997. 2001. 2006).

Considering the aspects mentioned earlier and the need to deepen knowledge on how anxiety is related to self-efficacy in Accounting Sciences graduate programs. we propose the following guiding question: **What is the relationship between anxiety and self-efficacy among students attending Accounting Sciences graduate programs?** Therefore. this study's general objective is to seek evidence to analyze the relationship between self-efficacy and anxiety among the students of Accounting Sciences graduate programs. Additionally. this study sought to identify whether gender correlates with anxiety levels and self-efficacy and how it impacts the students' performance.

Anxiety is mental distress that prevents individuals attending a graduate program from developing their full potential because it distracts. disorients. hinders concentration. and causes other problems that harm performance (Costa. 2001; Reis *et al..* 2017). It needs to be investigated because. even though it does not always result in extreme outcomes such as school dropout. it prevents students from achieving their full potential. Additionally. students with high anxiety levels may acquire poor education. which will reverberate in society. as such a student may become an incomplete professional. who may even be responsible for training future accountants. Students may also experience frustration and sorrow for not obtaining a Master's or Doctoral degree in Accounting Sciences and not having his/her skills. competencies. and attitudes fully developed.

Additionally. an individual's social context. including parents. spouses. children. and friends. is also affected. considering these individuals share an individual's achievements and frustrations. A study reports that 70% of the 33 Brazilian Accounting Sciences programs provided by public institutions. that is. programs using public resources. must be adequately harnessed to train good Masters and doctors.

From this perspective. seeking new ways to modulate anxiety is essential to prevent students from dropping out. experiencing mental distress. or obtaining deficient training. This objective can be achieved by concomitantly addressing self-efficacy. as it influences the students' choices. effort. and resilience (Schunk. 1991).

2. Literature Review

2.1 Self-Efficacy

Bandura's (1977) seminal study provided the guidelines to measure self-efficacy in different domains by proposing a cognitive mechanism able to support an individual's behavior in several spheres: "This essential mechanism that functions as a cognitive and motivational mediator is called perception. belief or self-efficacy expectancy" (Nogueira & Mesquita. 1992. p.16).

Therefore. perceived self-efficacy is one's belief in his/her ability to organize and perform actions or courses of actions to attain specific objectives or perform tasks (Bandura. 1977. 1988. 1989. 1997. 2001. 2006). "Self-efficacy is a belief in one's potential cognitive. motivational and behavioral skills. necessary to perform a task in a given time and context" (Lopes. 2017. p. 39). In other words. it is an individual's belief in his/her ability to write a scientific paper. meet the minimum course load to graduate. or write a dissertation. Nogueira and Mesquita (1992) explain that self-efficacy expectations presuppose that an individual has the necessary skills and capabilities to attain his/her goals. Hence. self-efficacy expectation concerns the actions that must be implemented to carry out a specific behavior. which is graphically represented in Figure 1.
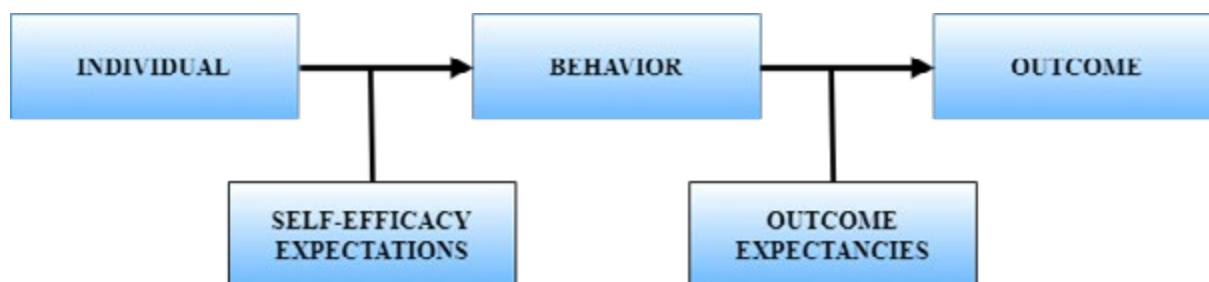

Figure 1. Graphical representation of Self-Efficacy Expectation and outcome expectancies.

Source: Bandura (1977).
(Translate: Individual; Behavior; Outcome; Self-Efficacy Expectations; Outcome Expectancies)

In addition to the self-efficacy expectations. Figure 1 presents outcome expectancies. According to Schunk (1991). there are constructs similar to self-efficacy. such as outcome expectancies and self-confidence. However. these concepts do not mix as each has unique characteristics. Note that self-efficacy expectations concern one's belief in his/her ability to carry out a specific behavior. while outcome expectancies concern the consequences of such behavior (Bandura. 1977. 1988. 1989. 1997. 2001. 2006).

For instance. imagine a student who believes that preparing hard for a difficult test will ensure that s/he will pass the test; that is. the student's outcome expectancy is that if s/he prepares. s/he will succeed. However. this student doubts s/he will be able to perform all the activities required to prepare. for instance. being able to understand the content. doing the homework. etc.; hence. this student has a low level of self-efficacy in his/her ability to execute this course of action. As a result. even though s/he believes that a particular course of action (studying) produces the desired outcome (pass the test). this information will not influence his/her behavior because of low self-efficacy. Although these are close concepts. this example shows that outcome expectancies differ from self-efficacy.

Among the self-concept dimensions. self-confidence is the most similar to self-efficacy (Schunk. 1991). Self-confidence is an individual's belief that s/he can produce results and achieve goals. However. self-confidence differs from self-efficacy because the latter predicts behavior in specific situations; that is. self-efficacy is considered at the domain's specific level (Schunk. 1991). For instance. a student may consider him/herself intelligent and capable of academic achievements (self-confidence) but consider him/herself incompetent to do a mathematical exercise (mathematical self-efficacy).

Various processes influence self-efficacy. To analyze self-efficacy. Bandura (1977) conducted a study with phobic individuals and established fundamental concepts of the Self-Efficacy Theory. which are divided into three: self-efficacy dimension. sources of self-efficacy. and cognitive processing of self-efficacy information (Nogueira & Mesquita. 1992). Bandura (1977) concluded that self-efficacy beliefs influence and ground various cognitive processes. such as motivational processes. individual performance. and emotional well-being (Bandura. 1977. 1988. 1989. 2001. 2006).

An additional conclusion is that self-efficacy is influenced by various processes. and may be generated. increased or decreased. developed. changed. regulated. or mobilized through four sources of information: performance achievement (personal). vicarious experiences. verbal persuasion. and emotional arousal (or activation). Other authors (e.g.. Dobarro. 2007; Nogueira & Mesquita. 1992; Schunk. 1991; Schunk & Pajares. 2001) tested and verified this proposition.

In recent decades. especially from the 1990s. self-efficacy was considered a predictor of students' motivation and learning. Additionally. most studies assessing self-concepts focused on self-efficacy (Weiner. 1990; Zimmerman. 2000).

Therefore. after Bandura (1977). other studies such as Lent. Brown. and Larkin (1984) tested the constructs of self-efficacy in education. verifying the relationship between self-efficacy and persistence and success of 42 students attending sciences and engineering programs (28 men and 14 women who took a 10-week course on career planning in the sciences and engineering fields). The authors constructed self-efficacy measures based on the procedures used by Betz and Hackett (1981) and classified individuals with scores in the scale's upper third as having 'high-level self-efficacy'. Individuals with scores in the scale's lower third were considered to have 'low levels of self-efficacy'. The results show that the students who reported higher levels of self-efficacy for educational demands persisted longer and obtained higher grades than the remaining.

Shell. Bruning. and Murphy (1989) addressed students attending a preparatory teaching program. The sample comprised 153 students: 115 women and 38 men. The authors investigated the relationship between self-efficacy and success in performing reading and writing tasks. Shell *et al.* (1989) concluded that 32% of the variability in reading tasks was predicted together by self-efficacy beliefs and outcome expectancies. However. regarding writing tasks. only perceived self-efficacy appeared as a significant predictor. Finally. the authors concluded that the results align with what Bandura (1986) theorized; hence. these results validate self-efficacy measures and show their role in motivation.

Another study that tested self-efficacy in education was Pajares and Miller (1994). The authors used path analysis to test self-efficacy's predictive and mediating roles in solving mathematical problems. The sample comprised 350 college students: 229 women and 121 men; 137 attended a program in education. and the remaining 213 attended other programs. The results confirmed that self-efficacy was a better predictor of problem-solving capacity than self-concept. perceived utility. prior experiences. and gender. Another result was that gender and prior experiences. mediated by self-efficacy. influenced problem-solving capacity. perceived utility. and self-concept. Finally. the authors concluded that the results reinforce the role of self-efficacy as hypothesized by Bandura (1986).

There are also studies in the Accounting Sciences field. For example. Byrne. Flood. and Griffin (2014) investigated self-efficacy among undergraduate students attending the first year of an Accounting program. The sample comprised 183 first-year students (response level: 86%) enrolled in an Irish university's Accounting and Finances program (52.5% were male students and 47.5% were female students). The authors concluded that higher levels of self-efficacy regarding one's ability to meet deadlines and understand content are associated with higher grades in accounting courses.

Hence. extensive empirical evidence shows not only the predictive role of self-efficacy but also its relationship and interference with cognitive processes involved in learning.

2.2 Anxiety

Anxiety is an adaptation response that prepares an organism to deal with difficulties or life-threatening events (Neiva. 2010). Therefore. it is a natural and positive state that helps individuals to focus attention on the task at hand. However. it may be a negative state when it is too intense. may result in exaggerated fear and uneasiness. interfering in the natural development of daily tasks. or incapacitating an individual (Castillo. Recondo. Asbahr & Manfro. 2000; Weiner & Craighead. 2009).

There are various anxiety disorders. The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders lists the 11 most common. In this sense. Clark and Beck (2012) propose that five cumulative criteria must be met to classify anxiety as abnormal: Dysfunctional Cognition. Impaired Functioning. Maintenance. False Alarms. and Hypersensitivity to Stimulus.

Dysfunctional Cognition concerns the activation of dysfunctional beliefs. falsely assuming or wrongly identifying a situation as dangerous. Impaired Functioning concerns interferences in an individual's routine (social or occupational) functioning. Maintenance refers to how long an anxious condition persists; high anxiety levels may persist for months or years. False alarms are characterized by intense fear or panic in the absence of threatening signs. Finally. Hypersensitivity to stimulus is characterized by increased activation of anxiety symptoms. even when a threat is mild or harmless.

Clark and Beck's (2012) anxiety processing model (Figure 2) shows the structures. processes. and products of the information system involved with anxiety. characterizing 'state anxiety' as a result of "an inappropriate and exaggerated assessment of personal vulnerability resulting from a faulty information processing system that misinterprets neutral situations or threatening signs" (Clark & Beck. 2012. p.45).
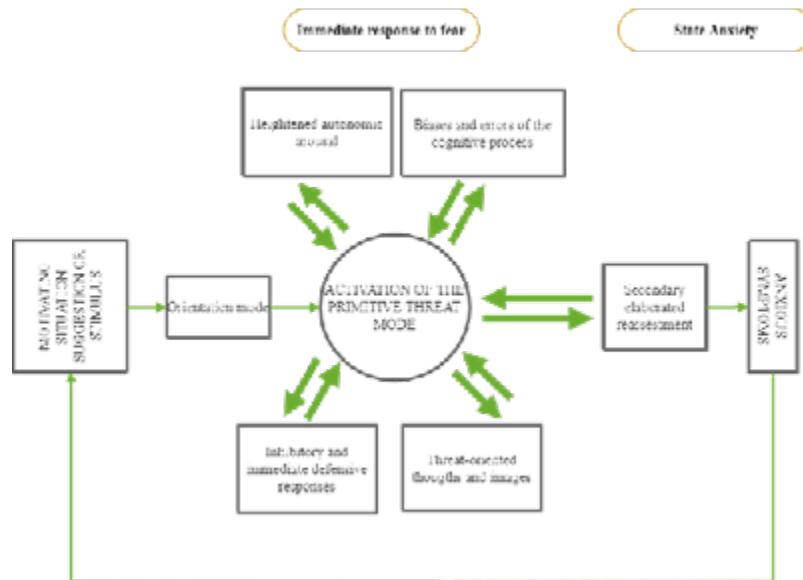

Figure 2. Anxiety Cognitive Model

Source: Clark and Beck (2012. p. 43)
(Translate: Immediate response to fear; Heightened autonomic arousal; Biases and errors of the cognitive process; MOTIVATING SITUATION. SUGGESTION OR STIMULUS; Orientation mode; ACTIVATION OF THE PRIMITIVE THREAT MODE; Inhibitory and immediate defensive responses; Threat-oriented thoughts and images; State anxiety; Secondary elaborated reassessment; ANXIOUS SYMPTOMS).

Neiva (2010) notes that one of the most important references to investigate anxiety is Spielberger (1972) because he developed the basis for understanding anxiety from a dualistic perspective. state anxiety. and trait anxiety. The approach used in this study is trait anxiety because it refers to more stable individual differences than state anxiety (Biaggio. Natalício & Spielberger. 1977); thus. we minimize the impact of ecosystemic and situational factors that mediate state anxiety.

Various studies addressing anxiety considered the difference between state anxiety and trait anxiety. assessing their different aspects. For example. Weiner (1990) emphasizes the importance of differentiating state anxiety and trait anxiety:

State anxiety (A-state) is conceptualized as a transient emotional state or condition of the human organism that is characterized by unpleasant feelings of tension and apprehension consciously perceived and by an increase in the activity of the autonomic nervous system. A-state scores can vary in intensity and fluctuate over time. A-trait refers to relatively stable individual differences in anxiety proneness. that is. the difference in the propensity to react to situations perceived to be threatening. increasing the intensity of the state of anxiety. As a psychological concept. trait anxiety has the characteristics of a class of constructs that Atkinson (1) calls "motives" and Campbell (2) refers to as "acquired behavioral dispositions". Atkinson defines motives as dispositions that remain latent until a situation activates them. According to Campbell. acquired behavioral dispositions involve residues of past experiences. predisposing an individual to see the world in a certain way and manifest objective and realistic reactions (Biaggio. Natalício. & Spielberger. 1977. pp. 31-32).

In summary. state anxiety concerns how an individual feels at the time of the assessment. while trait anxiety concerns how this individual usually feels. Trait anxiety is related to 'being anxious all the time'. while state anxiety is related to 'being anxious at a given time' (Neiva. 2010). Thus. trait anxiety is structured to assess a personality's stable anxiety factors (Neiva. 2010). Additionally. some aspects addressed in the methodological section indicate that trait anxiety is more appropriate for this study than state anxiety.

Similar to self-efficacy. anxiety has also been investigated in the education field. For instance. Betz (1978) assessed the factors related to the prevalence and intensity of mathematical anxiety among 652 students attending mathematics and psychology courses in an American university. The author concluded that mathematic anxiety frequently occurs among college students. most frequently among women and students with a history of inefficiency in mathematics. Additionally. anxiety was inversely proportional to the scores obtained in mathematics performance tests; the more anxious an individual. the lower his/her score and vice-versa. This finding corroborates the notion that anxiety can interfere with academic performance.

Using the state-trait anxiety inventory. Simon and Thomas (1983) investigated anxiety among 1.274 British students from different universities. The results show that the type of institution and program influence one's anxiety levels. Additionally. regardless of the institution and program. women scored significantly higher in anxiety than men.

Reis *et al.* (2017) investigated whether anxiety was significantly associated with the academic performance of 205 students attending the Accounting Sciences program of a Brazilian institution. The authors concluded that trait anxiety was negatively and significantly associated with academic performance. Another aspect raised was that even though female students scored significantly higher in anxiety than their male counterparts. their academic performance was also significantly superior to that of men. Hence. female students could perform even better if they decreased their anxiety levels.

Therefore. the previous discussion indicates that anxiety is an emotional state that. in addition to its psychological and physiological components. may manifest as a pathology under certain environmental and genetic circumstances and harm an individual's learning and potential. In this sense. perceived self-efficacy is a way to regulate cognitive responses prior to the state of anxiety. favoring learning and performance. Thus. the relationship between these two variables will be analyzed from a quantitative perspective. as presented below.

The relationship between anxiety and self-efficacy was also analyzed. For instance. Smith (1989) performed an experiment with 42 college students recruited from the 452 students attending an introductory psychology course. The author verified whether reinforcement of perceived self-efficacy (by training cognitive-behavioral coping skills) would decrease anxiety among students presenting anxious conditions. The conclusion was that. compared to the control group. the trained individuals significantly decreased trait anxiety and state anxiety and also obtained higher academic performance. Therefore. in line with Bandura (1977. 1988. 2006. 2018). the results corroborate the notion that self-efficacy influences anxiety.

Therefore. according to Bandura (1988). perceived self-efficacy controls potential threats and plays a key role in arousal caused by anxiety. According to the author. a threat is a relational property that reflects the correspondence between perceived coping skills and potentially harmful aspects of the environment. For this reason. people who believe they can control potential threats do not become involved or are disturbed by anxious thoughts. However. individuals who believe they cannot manage potentially threatening events experience high levels of arousal caused by anxiety (Bandura. 1988).

3. Method

3.1 Study design. population. and data collection

Regarding the objectives. this study is classified as descriptive. and a survey was the strategy used to collect data. while a quantitative approach was adopted to address the problem. It was registered in the institutional review board under CAAE: 97431018.1.0000.5149. Data concerning the universities with degree-granting Accounting Sciences programs were obtained through metadata from the Sucupira system. retrieved in June 2018. After consulting the programs in the Sucupira platform. we searched the websites of the respective programs. where the emails and telephones of the programs' secretary or coordinator were provided. Next. a message was sent via email. and a telephone call was made to explain the study's objectives and ask for the students' emails. The population comprised 1.402 students regularly enrolled in Accounting Sciences graduate programs. The sample comprised 322 students who completed the online questionnaire (in the platform: *pesquisasonline.com*) available from September to November 2018. Data analysis revealed that 322 out of the 383 students who started filling in the questionnaire completed it. This number of respondents corresponds to a response rate of 23.93%.

3.2 Data collection instruments

The instruments used to collect data were exclusively available online. A form divided into three blocks addressed descriptive variables (age. gender. marital status. etc.). the General Self-Efficacy Scale. and Trait-Anxiety Inventory.

According to Teixeira. Dias. and Dell'Aglio (2012). general self-efficacy is usually assessed using the general self-efficacy scale. Schwarzer and Jerusalem developed the scale's German version in 1981. It contained 20 items and was later adjusted to 10 items (Schwarzer. Bäßler. Kwiatek. Schröder. & Zhang. 1997). It was adapted to different languages (Schwarzer & Jerusalem. 1995. cited by Scholz. Doña. Sud. & Schwarzer. 2002). and the versions kept the instrument's construct validity and reliability. while findings suggest that it is a multicultural scale (Luszczynska. Scholz & Schwarzer. 2005; Schwarzer *et al.*. 1997). The Brazilian version was translated and validated by Scholz *et al.* (2002) and is composed of 10 items rated on a four-point Likert scale: 1 = Not at all true; 2 = Hardly true; 3 = Moderately true; and 4 = Exactly true (Biaggio *et al.*. 1977; Spielberger. Gorsuch. & Lushene. 1970).

The subscale addressing trait anxiety of the Brazilian version of the state-trait anxiety inventory (IDATE) was used to measure Anxiety. The inventory was developed by Spielberger and associates (Spielberger & Gorsuch. 1966; Spielberger *et al.*. 1970) to characterize how individuals feel most of the time (regarding anxiety). According to Spielberger (1972). evidence of construct validity of the State-Trait Anxiety Inventory is found in Auerbach (1971). Hall (1969). Hodges (1967). Hodges and Felling (1970). and O'Neil. Spielberger. & Hansen (1969). Biaggio *et al.* (1977) also translated and validated this instrument in the Brazilian context. The Brazilian version is composed of 20 items rated on a four-point Likert scale: 1 = Almost never; 2 = Sometimes; 3 = Often; 4 = Almost always. Only the items addressing the diagnosis of trait anxiety were used. The reason is that state anxiety concerns how individuals feel when the questionnaire is applied or when performing a given task. and this study was intended to analyze anxiety as a characteristic of respondents.

3.3 Hypotheses and data analysis

Self-efficacy expectations concern an individual's belief that s/he can perform the actions necessary to meet situational demands (Bandura. 1977. 1988. 1989. 1997. 2001. 2006). Hence. by definition. self-efficacy concerns how capable individuals consider themselves in organizing resources and taking the actions required to perform as expected or desired (Nurttila. Ketonen & Lonka. 2015. Roick & Ringeisen. 2017). Bandura (1977. 1988. 1989. 1997. 2001. 2006) identifies four sources through which self-efficacy is acquired or changed: performance achievement (past experiences). indirect experience (vicarious learning). verbal persuasion (suggestions and messages of relevant people such as parents. teachers. friends). and emotional arousal (enthusiasm. anxiety. and others).

Hence. the higher an individual's level of perceived self-efficacy. the higher this individual's positive and optimistic view of his/her psychological resources to perform tasks. For this reason. individuals with high self-efficacy levels tend to tackle more challenging tasks; such a belief has the potential to motivate individuals to put more effort and persist longer when facing adverse stimuli (Bandalos. Yates & Thorndike-Christ. 1995).

Consequently. those with a self-image low in self-efficacy tend to judge themselves as ineffective and give up easily. Moreover. these individuals may insist on their perceived deficiencies. which prevent them from paying attention to the task at hand. experiencing anxiety. distress. and depression. and assigning their successes to external factors and failures to internal factors (Cassady & Johnson. 2002). On the other hand. when individuals with high self-efficacy levels face adverse stimuli. they tend to hold a positive self-image and consider themselves capable of managing threats. not fearing or avoiding them (Bandura. 1977. 1988. 1989. 2001. 2006).

Successfully performing a task or behavior tends to increase one's expectations toward his/her efficacy in performing tasks or behaviors in the future; a successful performance raises one's self-efficacy (Bandalos *et al.*. 1995). Therefore. perceived self-efficacy leads to a sense of competence. a feeling of optimism (an optimistic mindset) that an individual can perform tasks effectively.

Self-efficacy in the academic environment means that students feel able to master academic content. attain objectives. and perform well compared to others. From this perspective. self-efficacy can be considered a mediator between knowledge and studying habits; students with a strong sense of competence are capable of dealing with challenging situations. overcoming obstacles. and engaging in studies (Miller & Lavin. 2007. Nurttila *et al.*. 2015. Roick & Ringeisen. 2017).

When facing demands. students with higher levels of self-efficacy apply task-focused active strategies and believe in their success. while those with low self-efficacy intentionally avoid challenging situations (Nurttila *et al.*. 2015). Additionally. prior experiences with challenging situations (e.g.. admission test to enter college. tests taken during college) provide students with higher levels of self-efficacy with a cognitive strategy (optimism) and contribute to their persistence in challenging tasks. Optimist individuals seem to perform better in academic tasks (Miller & Lavin. 2007. Nurttila *et al.*. 2015. Roick & Ringeisen. 2017). either because of their positive mindset. active actions. or resilience. Even when dealing with setbacks. these individuals credit such events to the need to apply more effort and dedication (Martin. Marsh & Debus. 2003).

On the other hand. students with low levels of self-efficacy. and consequently. low optimism. attempt to apply strategies to avoid tasks and rarely experience positive feelings when facing a challenge; avoiding tasks is also a way to minimize fear of failure or anxiety due to incomplete tasks (Nurttila *et al.*. 2015). Based on this rationale. the first hypothesis is proposed:

H$_1$: Academic performance is positively influenced by the students' perceived self-efficacy.

Therefore. given its modulating role. self-efficacy is an important mechanism for controlling performance. Bandura (1988) argues that people who believe they can control potential threats do not become engaged in or are disturbed by anxious thoughts. However. individuals who believe they cannot manage potentially threatening events may experience high levels of emotional arousal. apprehension. and tension.

Consequently. a negative self-concept regarding one's resources and capabilities may lead to anxiety disorders (Nurttila *et al.*. 2015). In other words. an individual who considers him/herself capable is able to control arousal because this individual is confident s/he will achieve his/her goals. This empirical finding indicates that low self-efficacy and high anxiety levels are related to poorer academic performance or evaluations (Cassady & Johnson. 2002. Nurttila *et al.*. 2015. Roick & Ringeisen. 2017). Additionally. students experience preemptive mental distress (Hunsley. 1985).

According to current conceptualizations. when anxiety reaches unadvisable high levels. a cognitive interference model takes place in which thoughts that are irrelevant to the task at hand emerge in anxious students. such as a sense of inadequacy. helplessness. and concern with losing status. which may harm their performance (Nurttila *et al.*. 2015. Roick & Ringeisen. 2017). Thus. arousal caused by high anxiety levels undermines students' confidence. decreasing their performance in academic tasks and learning situations (Roick & Ringeisen. 2017). Accordingly. hypotheses 2 and 3 are presented:

H$_2$: Academic performance is negatively affected by students' trait anxiety.
H$_3$: Self-efficacy is negatively and significantly correlated with trait anxiety.

The last perspective from which anxiety and self-efficacy are investigated concerns gender. Studies addressing gender roles suggest that stereotypical male characteristics can be summarized as primarily instrumental qualities. e.g.. assertiveness. activity. competitiveness. and dominance (Hackett & Betz. 1981). These attributes should facilitate not only one's behavior but also increase the likelihood of success (Mohammadyari. 2012. Jung & Oh. 2016). On the other hand. the stereotypical female role reflects a combination of emotionally expressive characteristics. such as nurturing. sensitivity. caring. and passive. submissive attributes (Hackett & Betz. 1981. Jung & Oh. 2016. Fritz & Van Knippenberg. 2018). Even though the qualities related to the female role are positive by nature. they do not readily lead to a successful performance of tasks expected by organizations (Hackett & Betz. 1981. Erdwins. Buffardi. Casper. & O'Brien. 2001).

In this social context. women face barriers such as discrimination. sexual harassment. and a lack of (structural and psychological) support systems. which are obstacles demanding high levels of self-efficacy. For the same reason. women deal with a more significant emotional imposition. as they are expected to harmonically heed family and professional demands (Erdwins *et al.*. 2001). However. to meet domestic responsibilities. women. more often than men. restrict their attempts to attain less prominent positions (rather than leadership positions. for instance) in favor of family life; hence. many women. especially those with children. seek flexible jobs (Erdwins *et al.*. 2001. Fritz & Van Knippenberg. 2018). As the ideal employee is someone who prioritizes work over family and working long hours equates with commitment. family-oriented women usually consider it obvious not to be considered for leadership and better pay positions (Fritz. & Van Knippenberg. 2018).

This social pressure has repercussions on women's health and mental disposition. Essentially. as a result of the social context. women lack high self-efficacy expectancies for their careers and. for this reason. do not fully develop their professional capabilities and talents (Hackett & Betz. 1981. Lewinsohn. Gotlib. Lewinsohn. Seeley & Allen. 1998). Furthermore. for the same reason. women would be more susceptible to higher anxiety levels (Jung & Oh. 2016). while men would benefit from higher levels of self-efficacy. Consequently. men would perform better in evaluations within the academic context. and women's performance would be harmed because they are more susceptible to anxiety (Hackett & Betz. 1981. Mohammadyari. 2012. Jung & Oh. 2016. Fritz & Van Knippenberg. 2018).

According to the previous discussion. the following hypotheses are proposed:

H_4: Female students present lower self-efficacy scores than male students.
H_5: Female students obtain higher trait anxiety scores than male students.

The scales' analyses were based on the guidelines proposed by the authors of the original versions. based on empirical distributions of the population in which each scale was applied (or a given reference population). The Shapiro-Francia test. t-test or Mann-Whitney. or Kruskal-Wallis test was performed for the difference of means. while Pearson's test or Spearman's test was performed to verify the correlation between the variables. We considered that data could be treated using these methods because we assumed that the constructs were determined by a composite score (Joshi. Kale. Chandel. & Pal. 2015) and also because some authors indicate that data resulting from a Likert scale can be considered interval (Carifio & Perla. 2008. Brown. 2011).

The statistical significance was set at 10%. We choose this significance level because studies focusing on personalistic factors are believed not to present a deterministic relationship between the variables and their constructs. considering that the aspects that compose them are multifaceted (Nuzzo. 2014. Wasserstein & Lazar. 2016).

A linear regression analysis was also conducted to verify the effect of anxiety and self-efficacy on the students' performance and check *H1* and *H3*. The descriptive variables were used as control variables. Therefore. model 1 is illustrated as follows:

$$MGD = \alpha_1 + \beta_1 (Anxiety) - \beta_2 (Self\text{-}efficacy) + \beta_3 (Age) + \beta_4 (Mariatal\ Status_{Dummy}) \qquad (1)$$
$$+ \beta_5 (Doctorate_{Dummy}) + \beta_6 (No\ Support_{Dummy}) + \beta_7 (Scholarship_{Dummy})$$

Where:
- *MGD* is the General Mean of the Courses reported by the participants;
- *Anxiety* is the score the participants obtained on the IDATE;
- *Self-efficacy* is the score the participants obtained on the general self-efficacy scale;
- *Age* is the age the respondents reported;
- *Marital Status* is a *dummy* in which 1 refers to married participants or in a stable relationship and 0 otherwise;
- *Doctorate* is a *dummy* in which 1 refers to participants enrolled in a doctoral program at the time of the survey and 0 refers to Master's students;
- *No Support* is a *dummy* in which 1 refers to students who reported psychological. psychiatric or financial support;
- *Scholarship* is a *dummy* in which 1 refers to respondents who reported a scholarship and 0 otherwise.

After estimating the model. the validations required by the method employed were performed: multicollinearity. normality of residuals. correlation of error with the variables. mean of error. functional form. and heteroscedasticity.

4. Presentation and discussion of results

4.1 Descriptive analysis

Regarding gender. the sample comprised 52.48% (169) female and 47.52% (153) male students. These results are in line with Simil (2016). in which 51.81% (115) of the students were women and 48.19% (107) were men; however. they differ from the population data retrieved from the Sucupira report of the Coordination for the Improvement of Higher Education Personnel (Capes). According to the report. 55.63% (780) of the students were male. and 44.37% (622) were women. However. the Sucupira report presents data from 2017 (the last year available); hence. it disregards Master's and doctoral students enrolled in 2018. the year the sample was recruited. For this reason. this analysis suggests that there were more women among the graduate students in the Accounting Sciences program at the time of data collection (General: 44.37% to 52.48%; Master's: 43.37% to 50.41%; Doctorate: 47.40% to 59.21%).

As for the respondents' mean grade. on average. the students reported a grade equal to 85% of the possible grade up to the time they answered the instrument. Women reported a grade 0.7% higher than that reported by men. As the normality test indicated that the mean grades did not follow a normal distribution (p-value=0.01811). a non-parametric test was performed to verify the association between the grades and gender. The test revealed that. even though the women reported a slightly higher mean grade. it did not indicate that grade was associated with gender (p-value=0.4345).

The sample was 33.7 years old on average; 75% were aged over 27. The median was 31 years old; the standard deviation was 9.2. In this sense. the minimum and maximum values concerning age are noteworthy. The minimum age was 18 years old; that is. there was a female Master's student who was approximately 15 years younger than the sample's mean. This information is of note because. in Brazil. individuals must complete an undergraduate program before entering a graduate program (Brasil. 1996). This information shows that this student entered the undergraduate program when she was even younger. In turn. the maximum age was 68; there was a male Master's student 35 years older than the sample's mean. This finding illustrates Freire's (1983) proposition that education is sought throughout life. The results previously mentioned are presented in Table 1.

Table 1
Students' profile

Group	Description	General		Female		Male	
		N	%	N	%	N	%
General mean obtained in the courses	Mean	85.0	-	85.4	-	84.7	-
	Median	85.0	-	85.0	-	85.0	-
	Standard deviation	8.0	-	7.8	-	8.1	-
	Minimum	65.0	-	65.0	-	65.0	-
	Maximum	100.0	-	100.0	-	100.0	-
	1st Quartile	80.0	-	80.0	-	80.0	-
	3rd Quartile	90.0	-	90.0	-	90.0	-
Age	Mean	33.7	-	31.6	-	36.0	-
	Median	31.0	-	30.0	-	35.0	-
	Standard deviation	9.2	-	8.0	-	9.9	-
	Minimum	18.0	-	18.0	-	20.0	-
	Maximum	68.0	-	62.0	-	68.0	-
	1st Quartile	27.0	-	26.0	-	28.0	-
	3rd Quartile	39.0	-	36.0	-	42.0	-
Marital Status	Married/ Fixed Partner	156	48.45%	72	42.60%	84	54.90%
	Single	150	46.58%	85	50.30%	65	42.48%
	Divorced/ Separated	15	4.66%	11	6.51%	4	2.62%
	Widowed	1	0.31%	1	0.59%	0	0.00%
Graduate program	Master's degree	246	76.40%	124	73.37%	122	79.74%
	Doctorate degree	76	23.60%	45	26.63%	31	20.26%
Residence	At the graduate program's location	190	59.00%	104	61.54%	86	56.21%
	Did not live at the graduate program's location and did not move	83	25.78%	41	24.26%	42	27.45%
		49	15.22%	24	14.20%	25	16.34%

Source: study's data (2018)

Still. regarding age. the men's average age (36.0) is higher than that of women (31.6). Furthermore. the Man-Whitney test (normality test. p-value=0.000) showed that the average age is statistically different between the genders (p-value = 0.00). Hence. men are older than women in the Master's and doctoral programs. suggesting that men take longer to enter a graduate program.

Regarding the type of graduate program. most of the sample and the population are Master's students. For this reason. Master's students represent 76.40% of the sample. while doctoral students represent 23.60%. similar to data found in the Sucupira Report (CAPES. 2016). Another descriptive variable analyzed was the students' marital status; 48.45% of the students were married or were in a stable relationship; 46.56% were single; 4.66% were separated or divorced. and 0.31% were widowed.

The responses for the descriptive variables also revealed information regarding the students' place of residence. The students generally lived near the graduate program (59.00%). Those who did not (25.78%) live near the program. did not move. Regarding academic support. most students (56.21%) reported no support was provided when they were completing the program's credits; 33.54% received a scholarship; 4.66% received psychiatric or psychological support. and 5.59% received a scholarship and psychological or psychiatric support. The relationship between these variables is presented in Figure 3.
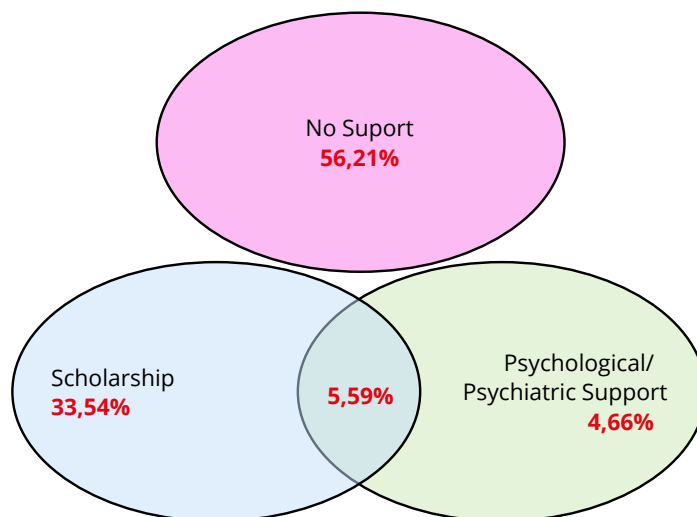

Figure 3. Support provided to students

Source: study's data (2018)

As for scholarships. Simil (2016) verified that 46.85% of the students received financial support in the form of scholarships. This figure is higher than that found in this study. in which 43% reported a scholarship. This difference possibly indicates that the cut in higher education funding decreased the financial support provided by the universities to students.

4.2 Quantitative analysis

Of the 383 students who started filling out the questionnaire. 322 completed all the questionnaire's stages. Hence. 322 responses were considered in the quantitative analysis (return rate of 23.93%).

4.2.1 Results of the General Self-Efficacy Scale

The general self-efficacy scale comprises 10 items rated on a Likert scale ranging from '10' to '40' points. Most students scored in the scale's upper third. considering the sum of items "moderately true" e "exactly true". The statistics in general and according to gender are presented in Table 2.

Table 2
Distribution of General Self-Efficacy and by Gender

Description	General (N = 322)	Female (N = 169)	Male (N = 153)
Mean	32.1	31.8	32.4
Median	32.0	32.0	32.0
Standard deviation	4.5	4.7	4.3
Coefficient of variation	14.1%	14.8%	13.3%
Minimum	19.0	19.0	22.0
Maximum	40.0	40.0	40.0
1st Quartile	29.0	29.0	30.0
3rd Quartile	35.0	35.0	36.0

Source: study's data (2018)

Considering data were normally distributed (Shapiro-Wilk p-value=0.11960). a t-test was performed to verify whether the male students' self-efficacy mean was higher than that of the female students (Table 2). Hence. the hypothesis of equal self-efficacy means failed to be rejected. indicating that the male students obtained the same mean as female students (p-value=0.2667). Thus. hypothesis four **Female students obtain lower self-efficacy scores compared to male students** was rejected in this study.

4.2.2 Results of the Anxiety Scale

The trait-anxiety scale comprises 20 items rated on a four-point Likert scale. with a total score ranging from 20 to 80. The mean score obtained by the female students in the anxiety inventory was 44.9. followed by the general mean (entire sample) of 42.3 and the male students' mean of 39.4. Therefore. the three scores are in the scale's upper third and close to the sample's median. This finding shows that most students who did not score in the sample's upper third presented low to moderate anxiety. These results are presented in Table 3.

The Mann-Whitney test (Shapiro Wilk p-value < 0.00) was performed to verify whether the means were statistically different. As shown in the table. the female students' anxiety scores were statistically higher than the male students' scores. We also verified whether this difference in the mean would remain in the gender analysis. considering the type of graduate program.

Table 3
Distribution of general anxiety and according to gender

Descrição	General (N = 322)	Female (N = 169)	Male (N = 153)
Mean	42.3	44.9	39.4
Median	41.0	44.0	38.0
Standard deviation	11.4	11.6	10.4
Coefficient of variation	26.9%	25.9%	26.4%
Minimum	20.0	20.0	22.0
Maximum	75.0	72.0	75.0
1st Quartile	33.0	37.0	32.0
3rd Quartile	50.0	54.0	45.0

Source: study's data (2018)

Regarding the mean anxiety score according to the type of graduate program and gender. the score obtained by male Master's students was 39.5. which is statistically lower than the score obtained by female Master's students. 44.4 (Mann-Whitney p-value=0.006). The same occurred with male doctoral students. 39.0. compared to female doctoral students. 46.2 (Mann-Whitney p-value=0.0068). Therefore. female Master's students are statistically more anxious than male Master's students. and female doctoral students are also more anxious than male doctoral students (Table 4). These results are similar to those reported by Simon & Thomas (1983). who concluded that female students presented higher anxiety scores regardless of the institution or program.

Table 4
Distribution of students' anxiety according to type of graduate program and gender

Description	Master's		Doctorate	
Gender	Femele (N = 124)	Male (N = 122)	Femele (N = 45)	Male (N = 31)
Mean	44.4	39.5	46.2	39.0
Median	42.0	38.0	46.0	39.0
Standard Deviation	11.6	10.3	11.8	11.1
Coefficient of variation	26.1%	26.0%	25.4%	28.4%
Minimum	20.0	22.0	22.0	22.0
Maximum	72.0	75.0	70.0	69.0
1st Quartile	35.5	32.0	37.0	30.0
3rd Quartile	53.5	45.0	54.0	45.0

Source: study's data (2018)

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Based on these results. the Hypothesis:

H$_5$: Female students obtain higher trait anxiety scores than male students failed to be rejected.

These results indicate that graduate programs have not overcome gender stigmas from social constructs (Hackett & Betz. 1981. Lewinsohn *et al.*. 1998. Mohammadyari. 2012. Jung & Oh. 2016. Fritz & Van Knippenberg. 2018).

4.2.3 Self-Efficacy and Anxiety

The relationship between self-efficacy and anxiety was also addressed in this study. Hence. a Spearman's correlation test was performed. and the results indicate that hypothesis **H$_3$: Self-efficacy is negatively and significantly correlated with trait anxiety** failed to be rejected; that is. the correlation between self-efficacy and anxiety is negative and statistically significant. with a value equal to -0.63 (Figure 3).
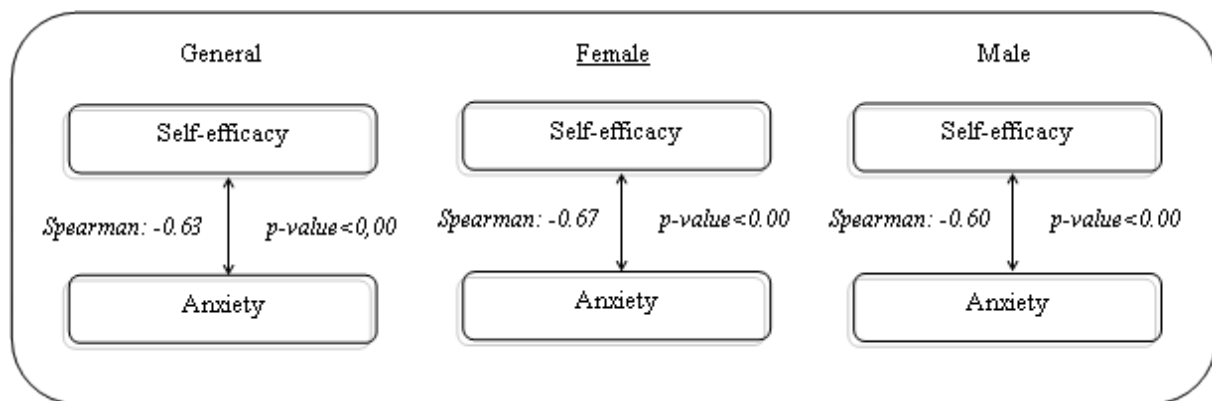

Figure 3. Correlation between self-efficacy and anxiety

Source: study's data (2018)

The correlation according to gender was also verified. The relationship between anxiety and self-efficacy is stronger among women (-0.67. p-value <0.00) than among men (-0.60. p-value <0.00). This result differs from that of Scholz (2002). who found a correlation of -0.43 for men and -0.42 for women. This difference may be related to the increase in mental disorders among graduate students reported by Levecque *et al.* (2017). Additionally. this result reinforces the role of self-efficacy as a tool to moderate anxiety. In this sense. "previous investigations suggest that the self-efficacy theory can be used to improve understanding of the experience of anxiety" (Nogueira & Mesquita. 1992. p. 18).

4.2.3 Performance x Self-Efficacy and Anxiety

The final analysis is related to this study's secondary objective. which was to verify how trait anxiety and self-efficacy impacted students' performance in the courses they attended in the graduate program. Initially. the model was estimated with all the variables; however. when non-significant variables were found. considering a minimum p-value of 10%. we opted for a model without these variables (Table 5). Based on this model (stepwise). the estimation validation tests indicated no problems regarding multicollinearity. normality of residuals. correlation of error with variables. mean error. functional form. and heteroscedasticity. However. the model was significant (p-value=0.0144). with an adjusted R^2 of 0.0201.

The estimation results showed two variables significant for the students' performance: receiving a scholarship during the program and perceived self-efficacy. A scholarship positively and significantly influences a student's performance. possibly because it enables students to dedicate more intensively to the program; hence. these students are expected to perform better than those not receiving a scholarship.

Regarding perceive self-efficacy. this variable is expected to be important for the students' performance because it is related to the students' confidence in themselves and their skills and capabilities. Self-efficacy favors a positive mindset and facilitates focusing on the task at hand. so that students are more persistent when facing challenges (Miller & Lavin. 2007. Nurttila *et al.*. 2015. Roick & Ringeisen. 2017). This result indicates that Hypothesis 1 failed to be rejected.

Table 5

Estimation of the Impact Model on Student Performance

Variable	Coefficient (Standard Error)	p-value
Constant	79.15 (2.88)	0.000
Scholarship	1.65 (0.81)	0.044
Self-efficacy	0.21 (0.90)	0.000

Source: study's data (2018)

On the other hand. Hypothesis 2. which stated that trait anxiety would negatively affect the students' performance. was rejected (p-value=0.380). This is because the students' mean anxiety score was approximately 53% of the scale (none of the students obtained a maximum anxiety score; the highest score was 75 – Table 3). For this reason. even though students presented a moderate level of anxiety. it did not cause them distress. It is an interesting piece of information because. according to Neiva. 2010. Borine (2011). and Clark and Beck (2012). anxiety promotes adaptation by causing psychological discomfort. By causing discomfort. it motivates students to put more effort into or anticipate a task. for instance.

Conclusion

This study's general objective was to seek evidence to analyze the relationship between self-efficacy and anxiety among students attending an Accounting Sciences graduate program. From this perspective. this study's importance lies in the need to identify the situation of graduate students attending an Accounting Sciences program. This information is expected to contribute to intervention strategies to solve problems or maximize the academic. scientific. and professional potential of academic training at this level (Evans *et al.*. 2018).

After outlining how self-efficacy and anxiety interfere in the cognitive process involving learning. we analyzed the answers provided by the 322 students who completed the general self-efficacy scale and trait anxiety inventory by performing statistical tests. There were more female students in the graduate program and also in comparison to the 2017 Sucurpira report. both for the Master's and doctoral programs. This information may indicate an increase in the number of female students in graduate programs. though further studies are needed to confirm this finding.

Additionally. the female students' average age was statistically lower than that of male students. while the number of male students Married/Fixed Partner was markedly higher than that of female students. Therefore. it may indicate that because the male students married earlier. they postponed their entry into graduate school.

Another descriptive finding concerns the fact that most students did not move their residences to attend the graduate program. suggesting that the students sought a graduate program near to their residences. This finding suggests that the expansion of degree-granting Accounting Sciences programs should consider an egalitarian geographic distribution. Finally. together with this information. we found that only a portion of the sample received a scholarship during the period they were attending classes. partially explaining the percentage of students who had a paid job while attending their graduate studies.

In turn. the quantitative analysis revealed no distinction between the genders' levels of self-efficacy. However. the mean obtained and perceived self-efficacy were positively and significantly associated. It partially confirms the theoretical proposition that self-efficacy expectancies influence outcomes. considering that by judging oneself to be self-effective. individuals adopt broader cognitive strategies to perform tasks (Bandura. 1977).

Regarding this study's primary objective. which was to analyze the relationship between self-efficacy and trait anxiety. we found a statistically significant ($p<0.00$) moderate and negative relationship (-0.63); i.e.. these two factors are inversely proportional. Hence. Hypothesis 3 failed to be rejected and is slightly stronger among women (correlation of -0.67) than among men (correlation of -0.60). This result indicates a need for the programs and students themselves to seek mechanisms to improve the students' mental wellbeing through measures that facilitate the students' self-efficacy. such as verbal encouragement. cognitive strategies. promoting mental self-care. self-assessment of emotional and physiological responses. encouragement. development of decision-making techniques and problem-solving capacity (Bandura. 1997. Ramos et al.. 2017). These seem interesting strategies because improving the students' perceived self-efficacy may indirectly decrease their perception of anxiety (Cassady & Johnson. 2002. Nurttila et al.. 2015. Roick & Ringeisen. 2017).

Additionally. the students' gender does not appear to be related to perceived self-efficacy; hence. Hypothesis 4 (p-value=0.2667) was rejected. Social roles (Hackett & Betz. 1981) were believed to trigger a self-image among women that they would not be as capable as men; however. the results reveal that women consider themselves as self-efficacious as men. This is a significant result and suggests that modern discussions regarding gender equality have led women to perceive their competencies and skills more positively (Hackett & Betz. 1981. Erdwins et al.. 2001. Jung & Oh. 2016. Fritz & Van Knippenberg. 2018).

However. regarding trait anxiety. female respondents presented anxiety levels higher than men (p-value=0.006); hence. Hypothesis 5 failed to be rejected. Therefore. social impositions resulting from women's social roles. especially that women will administer their homes. take care of their children. spouses. and even their parents if needed while performing well at work or academically (Hackett & Betz. 1981. Erdwins et al.. 2001. Jung & Oh. 2016. Fritz & Van Knippenberg. 2018) take a significant emotional toll. Consequently. women may find themselves immersed in a very demanding context. Such a context results in great mental distress (Jung & Oh. 2016). hurting one's quality of life and preventing a whole and pleasant academic experience.

The last conclusion concerning the students' performance. resulting from a linear regression analysis. is that self-efficacy positively moderates outcomes (p-value=0.000). Thus. in line with other studies (Miller & Lavin. 2007. Nurttila *et al.*. 2015. Roick & Ringeisen. 2017). Hypothesis 1 failed to be rejected. However. trait anxiety is not statistically significant (p-value=0.380) in this study. contradicting empirical evidence (Cassady & Johnson. 2002. Nurttila *et al.*. 2015. Roick & Ringeisen. 2017). This result reinforces that investments in developing the students' perceived self-efficacy contribute to a proper and rich education.

Future studies are suggested to address programs in other related fields. such as business administration. economy. etc.. to compare results and understand how these variables work in the academic context of other graduate programs. Additionally. future research can adopt a qualitative strategy to collect and analyze data by crossing information and investigating these constructs in a more individualized context.

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