Career Adaptability and Anxiety Symptoms in Pandemic Times: An Analysis with Postgraduate Students

Adaptabilidade de Carreira e os Sintomas de Ansiedade em Tempos de Pandemia: Uma Análise com Estudantes de Pós-Graduação

Luis Felipe Dias Lopes
Juciéle Fátima Coradini
Cristiane Krüger
Mauren Pimentel Lima
Silvana Bortoluzzi Balconi

ABSTRACT

Students who opt for postgraduate studies report difficulties developing their skills and difficult placement in the labor market. Given this and in view of the COVID-19 pandemic, this study aimed to analyze the relationship between career adaptability and anxiety symptoms triggered in graduate students. A survey of postgraduate data from different universities was carried out using the Career Adaptability Scale and the Trait-Anxiety and State-Anxiety Inventories. The sample reached 709 respondents, and data were analyzed using descriptive statistics and structural equation modeling. For career adaptability, our findings revealed that graduate students have various reasons for concern, control, curiosity, and confidence. Nonetheless, over 80% of students suffer from symptoms of anxiety and depression. The structural model showed a relationship between the scales surveyed, demonstrating that concern and control are determinants for trait anxiety, while control, concern, and curiosity are determinants for state anxiety. It was possible to conclude that awareness and prevention of depression in postgraduate studies are eminent, as well as the adoption of effective coping strategies. This study contributes to planning and improving management practices to preserve health and develop skills in Brazilian graduate programs.

Keywords: Career; Anxiety; Depression; Postgraduate; COVID-19.

Submitted: 03/01/2022
Accepted: 30/08/2022

Luis Felipe Dias Lopes
lflopes67@gmail.com
Doctorate in Production and Systems Engineering
Federal University of Santa Maria
Santa Maria / RS – Brazil

Juciéle Fátima Coradini
jucielecoradini2019@gmail.com
Master in Administration
Federal University of Santa Maria
Santa Maria / RS – Brazil

Cristiane Krüger
cristiane.kruger@ufsm.br
Doctorate in Administration
Federal University of Santa Maria
Santa Maria / RS – Brazil

Mauren Pimentel Lima
maurenplima@gmail.com
Master in Administration
Federal University of Santa Maria
Santa Maria / RS – Brazil

Silvana Bortoluzzi Balconi
silvana.balconi@ufsm.br
Doutorado em Administração
Federal University of Santa Maria
Santa Maria / RS – Brazil

RESUMO

Pós-graduandos relatam dificuldades para o desenvolvimento de suas habilidades e a difícil colocação no mercado de trabalho. Diante disso e tendo em vista o período pandêmico vivenciado, objetivou-se analisar a relação entre a adaptabilidade de carreira e os sintomas de ansiedade desencadeados em estudantes de pós-graduação. Para tanto, realizou-se um levantamento de dados com pós-graduandos de diferentes universidades brasileiras, adotando-se a Escala de Adaptabilidade de Carreira e os Inventários Ansiedade-Traço e Ansiedade-Estado. A amostra alcançou 709 respondentes. Os dados foram analisados por meio de estatística descritiva e modelagem de equações estruturais. Como resultados, para a adaptabilidade de carreira verificou-se que os pós-graduandos apresentam altas razões para preocupação, controle, curiosidade e confiança. Ainda, encontrou-se que mais de 80% dos estudantes sofrem com sintomas de ansiedade e depressão. O modelo estrutural evidenciou relação entre as escalas pesquisadas, demonstrando que preocupação e controle são determinantes para a ansiedade-traço; e, controle, preocupação e curiosidade são determinantes para a ansiedade-estado. Deste modo, conclui-se que são eminentes a conscientização e a prevenção da depressão na pós-graduação, bem como a adoção de estratégias eficazes para seu enfrentamento. A pesquisa contribui para o aperfeiçoamento de práticas de gestão que visem a preservação da saúde e o desenvolvimento de habilidades na pós-graduação brasileira.

Palavras-chave: Carreira; Ansiedade; Depressão; Pós-graduação; Covid-19.

Introduction

The scope of careers has been studied by countless authors who adopt different terminologies of its meaning and sense from different theoretical and epistemological perspectives0 (DUTRA, 2017, 2018; ZATTI et al., 2017). For Camargo (2016), the term career involves interdisciplinarity of many scientific areas, with approaches that are not consensual because it is widely used in everyday life, leading to numerous meanings. A career is not understood as a rigid process to be followed by the individual but as a sequence of positions and activities performed by oneself (DUTRA, 2018).

Magalhaes (2013) explained that the permanence or not of the individual in a particular career or work activity might be only a consequence of commitment. The author stated that even if the individual is highly committed to their career, they may make new choices for reasons such as changing values, priorities, and family issues.

It is also possible to state that low-committed workers may remain in the occupation given a lack of other job opportunities or financial reasons, requiring individuals to adapt to contingencies during their careers (DUTRA, 2018).

In this sense, career adaptability assumes relevance when one analyzes the relationship between career trajectory and organizational context, in which professionals are challenged to adopt a posture of adaptation to remain in the labor market (FIORINI; BARDAGI; SILVA, 2016). For Savickas and Porfeli (2012), the subject is considered adaptable in relation to the individual's career when they demonstrate concern for their future as a worker, expansion of personal control over the fate of their career, curiosity to explore possible future scenarios, and confidence in pursuing their vocational aspirations; in summary, the primary skills are concern, control, curiosity, and confidence.

Given this scenario, Costa and Nebel (2018) pointed to a growing concern with the labor market for postgraduate students in relation to the academic environment. For the authors, after years of research in terms of undergraduate, master's, and doctoral degrees, one can note the difficulty of private and public institutions in absorbing the number of graduated students. These obstacles, added to the burden of academic life, can trigger psychological problems, including anxiety (COSTA; NEBEL, 2018). The American Psychological Association (APA) defines anxiety as concern about the future, associated with muscle tension and avoidance behavior, which is the most current definition (APA, 2007).

In line with Costa and Nebel (2018), research in graduate academia has demonstrated the presence of anxiety and depression symptoms in students. For instance, Evans et al. (2018) surveyed over 2,000 graduate students (90% doctoral students and 10% master's students) on the subject in 26 countries. The authors concluded that 41% of students suffer from anxiety and 39% from depression. Another survey conducted by the University of Brasilia with postgraduate students revealed that they have some mental distress (UNB, 2018). Among the sample of 637 students, 90% reported anxiety as their main symptom, followed by discouragement (71.6%) and irritability (63.1%) (UNB, 2018). Corroborating these data, Lopes et al. (2020) surveyed students from various areas of the Federal University of Santa Maria (UFSM) and confirmed that most students already suffer from anxiety.

In this sense, considering that graduate students are six times more likely to develop anxiety and depression compared to the general population (ANPG, 2018), and because of the importance of mental health for their education, this study sought to analyze the relationship between career adaptability and anxiety symptoms triggered in graduate students.

Method

This study adopted a quantitative descriptive approach using a survey. A questionnaire was used for data collection and consisted of a procedure for collecting primary data from individuals, and it refers to acquiring data or information on the characteristics or opinions of a particular group of people (GIL, 2018). The data collection technique consisted of convenience sampling in July and August 2020 with graduate students from different higher education institutions in Brazil.

The questionnaire was composed of three instruments developed and validated in previous studies, namely: the career adaptability scale (CAS), the Trait-Anxiety Inventory (TAI), and the State-Anxiety Inventory (STAI). The questionnaire with the scales was self-administered (online) and contained instructions for completion and information on voluntary participation in the study.

Career adaptability was measured by utilizing the scale presented by Savickas and Porfeli (2012). The process of constructing the CAS occurred from a cross-cultural research group. The first version of the scale had a scope of 100 items, with every 25 items referring to one of the skills (concern, control, curiosity, and confidence). Later, three pilot studies conducted in the US using exploratory factor analyses reduced the scale to four 11-item sets. Then, the version with 44 items was applied in 13 countries, including Brazil (SAVICKAS; PORFELI, 2012). It is worth noting that the Brazilian version, for reasons of specificity and understanding, was altered with six items for each dimension (concern, control, curiosity, and confidence), totaling 24 items. The scale was evaluated by answering how much the person believes to have developed each skill on a Likert scale ranging from “very little” (1) to “completely” (5) (TEIXEIRA et al., 2012).

The Spielberg Anxiety, Trait, and State Inventories (i.e., STAI-T and STAI-S) developed by Spieberger, Gorsuch, and Lushene in 1970 were also utilized (LORICCHIO; LEITE, 2012); these scales were translated and adapted to Brazil by Biaggio and Natalício (1979). The STAI-S reflects a transient reaction related to a situation of adversity that presents itself at a given moment (FIORAVANTI et al., 2006). This scale is composed of 20 statements that require individuals to indicate how they feel at a given moment, and the score ranges from 1 to 4: absolutely (1), a little (2), a lot (3), and very much (4) (BARROS et al., 2011). The answers are interpreted using items of a positive nature according to the score and are read in reverse. On the state-anxiety scale, the positive items are: 1, 2, 5, 8, 10, 11, 15, 16, 19, and 20, and the negative items are 3, 4, 6, 7, 9, 12, 13, 14, 17, and 18. The sum of the values obtained in each response (final score) ranges from 20–80 points and corresponds to the level of anxiety, and 20–40 points are equivalent to a low level of anxiety, 41–60 points to a medium level of anxiety, and 60–80 points to a high level of anxiety (BARROS et al., 2017).

The STAI-T refers to a more stable aspect related to the propensity of the individual to deal with more or less anxiety in the course of his life (FIORAVANTI et al., 2006). The STAI-T is composed of 20 statements that require participants to describe how they generally feel; the answers are scored on a Likert-type scale ranging from 1 to 4: almost never (1), sometimes (2), a lot (3), and almost always (4). To interpret the answers, the items of a positive nature, according to their scores, are read in reverse, and on the anxiety-trace scale, the positive items are 1, 6, 7, 10, 16, 19, whereas the negative ones are 2, 3, 4, 5, 8, 9, 11, 12, 13, 14, 15, and 20. The sum of the values obtained in each response (final score) ranges from 20 to 80 points, in which 20–40 points are equivalent to a low level of anxiety, 41–60 points to a medium level of anxiety, and 60–80 points to a high level of anxiety (BARROS et al., 2011). These values were adapted according to the standardization proposed by Lopes (2018).

Data collection was carried out online between July and August 2020 using a research protocol composed of social demographic data (stage 1), CAS (stage 2), and the STAI-T and STAI-S (stage 3). Stage 1 of the questionnaire comprised 17 socio-demographic questions divided into two parts. The first one aimed to measure aspects such as age, gender, marital status, address, color, whether the participant has any disability, and whether they consider themself an anxious person. In the second part,

the academic profile was investigated to measure aspects including institution, teaching method, post-graduation, Capes evaluation grade, and length of study. The physical health profile was then analyzed: if the participants have any disabilities, are anxious, their relationship with their advisor, if they are undergoing any medical treatment, and if they take any medicine for anxiety in order to obtain the identification data of the sample. Stage 2 was composed of the CAS with 24 questions (observed variables, OVs) divided into four dimensions (latent variables, LVs): concern, control, curiosity, and confidence. Lastly, stage 3 comprised the unidimensional STAI-T with 20 questions and the unidimensional STAI-S with 20 questions.

The data obtained were analyzed by tabulating in an Excel® spreadsheet followed by analysis in the Statistical Package for the Social Sciences (version 26.0) and SmatPLS® (version 2.3.3) software to describe the sample and interviewees' profiles. The reliability of the two instruments was verified using Cronbach's alpha, with values ranging from 0 to 1. According to Field (2009), values between $0.7 \leq \alpha < 0.8$ represent acceptable indices, whereas indices between $0.8 \leq \alpha < 0.95$ are considered a good index and $\alpha \geq 0.95$ refer to an excess of equivalent responses; $\alpha < 0.6$ indicates that the scale is not reliable.

In order to achieve the research objective, we tested the relationships between the dimensions of career adaptability (concern, control, curiosity, and confidence) and anxiety (state anxiety and trait anxiety) using structural equation modeling (SEM), which is widely utilized to explain relationships among multiple variables (HAIR et al., 2009, p. 543). In doing so, one can examine the structure of interrelationships expressed in a series of multiple regression equations. Thus, the analysis of a model of relationships between constructs was promoted by investigating the hypotheses formulated from theory.

In order to obtain a structural model via variance-based partial least squares structural equation modeling (PLS-SEM), the following six steps were followed: specification of the structural model, specification of the measurement model, estimation of the path model, evaluation of the measurement model, evaluation of the structural model, and evaluation of the structural model (PORTO, 2019); these steps were based on Hair et al. (2017). The systematic model evaluation occurred in two steps (measurement model and structural model), with the respective values that should be considered for the analyses (Table 1).

Table 1 Systematic evaluation of results CAS → STAI

	Assessment of the Measurement Model		Acceptable Values
Tests	Internal Consistency	Cronbach's alpha	$0.7 < \alpha < 0.95$
		Composite Reliability	$0.7 < \rho_c < 0.95$
	Convergent Validity	Average Variance Extracted	AVE > 0.5
	Discriminant Validity	Fornell-Larcker Criterion	$\sqrt{AVE} > r_{ij}$ para $i \neq j$
		HTMT Criterion	UL (HTMT) < 1.0
	Structural Model Assessment		**Acceptable Values**
Tests	Collinearity Assessment (VIF)		VIF < 5.0
	Effect Size (f^2)		$0.02 \leq f^2 \leq 0.075$; (small); $0.075 < f^2 \leq 0.225$ (medium); and $f^2 > 0.225$ (grate).
	Determination Coefficient (R^2)		$0.02 \leq R^2 \leq 0.075$ (weak); $0.075 < R^2 \leq 0.19$ (moderate); and $R^2 > 0.19$ (hard).
	Student's t test for the relationship between dimensions		$t_{cal.} > 1{,}96$
	Predictive Relevance (Q^2)		$0.01 \leq Q^2 \leq 0.075$ (weak); $0.075 < Q^2 \leq 0.25$ (moderate); and $Q^2 > 0.25$ (hard).

Source: Proposed by Lopes et al. (2020), adapted from Hair et al. (2017).

The tests performed and criteria adopted for the systematic evaluation of the relationship between the CAS dimensions and anxiety symptoms (STAI) are listed in Table 1. The measurement model was initially evaluated, followed by the structural model.

According to the World Health Organization (2020), many people with depression also suffer from anxiety symptoms. Brazil was already the most anxious

country worldwide before the COVID-19 pandemic, representing 9.3% of the general population; with the onset of the pandemic, cases of anxiety skyrocketed by 80%, which may have worsened existing cases and destabilized those previously under control (FILGUEIRAS, STULTS-KOLEHMAINEN, 2020). The fear and concern for close people who fall ill and the economic or political situation of the country are conducive to the manifestation of anxiety (UFMG, 2020). In this sense, it seems correct to reflect that the anxiety levels of graduate students increased during the COVID-19 pandemic.

A structural model via PLS-SEM was proposed to relate career adaptability to anxiety symptoms in graduate students; SEM was conducted using the statistical software SmartPLS® (version 3.3.3) (RINGLE; WENDE; BECKER, 2015). The method is called partial least squares, which is suitable for modeling complex relationships with multiple dependence and independent relationships between LVs (NASCIMENTO; MACEDO, 2016).

In the first step of the specification of the PLS-SEM, the algorithm configured for seven completion criteria was used. The parameterized weighting based on the path model was adopted as it aims to provide higher values for the coefficients of explanation (R^2) for the endogenous variables. The number of iterations was set to 300, and the initial weights for the external indicators were equal to 1.0; thus, the model stabilized after seven iterations (HAIR et al., 2017).

Eight research hypotheses were developed based on the literature on career adaptability and anxiety, considering the four dimensions of career adaptability: concern, control, curiosity, and confidence, through which we proposed that such dimensions may relate directly to the trait and state anxiety positively or negatively. Trait anxiety refers to the symptom throughout life, while state anxiety refers to a symptom in a temporary, short-term moment. Hence, the following hypotheses were formulated:

H_1: Concern is related to State Anxiety;
H_2: Control is related to State Anxiety;
H_3: Confidence is related to State Anxiety;
H_4: Curiosity is related to State Anxiety;
H_5: Concern is related to Trait Anxiety;

H_6: Control is related to Trait Anxiety;
H_7: Confidence is related to Trait Anxiety;
H_8: Curiosity is related to Trait Anxiety.

Based on the proposed hypotheses, a measurement model was developed, which represents the relationships between the dimensions (latent variable - LV's) and their indicators (observed variable - OV's) (HAIR et al., 2017). The model is based on theory, a necessary condition to obtain useful results from the PLS-SEM. Hypothesis tests involving structural relationships will only be reliable and valid if the measurement model explains how the dimensions are measured. The measurement model presents eight structural coefficients (βs) with combinations that connect the six LV's and the 44 OV's.

Partial regression models are estimated by PLS-SEM algorithms, including the calculation of factor loadings, structural path model coefficients (Equations 1 and 2), and the resulting R^2 values of the predictor variables (HAIR et al., 2009).

$$\text{Trait Anxiety (TA)} = \beta_1 \text{PRE} + \beta_2 \text{CONT} + \beta_3 \text{CONF} + \beta_4 \text{CUR} + \varepsilon_{AT} \quad (1)$$

$$\text{State Anxiety (SA)} = \beta_5 \text{PRE} + \beta_6 \text{CONT} + \beta_7 \text{CONF} + \beta_8 \text{CUR} + \varepsilon_{AE} \quad (2)$$

In light of this, the results are presented below.

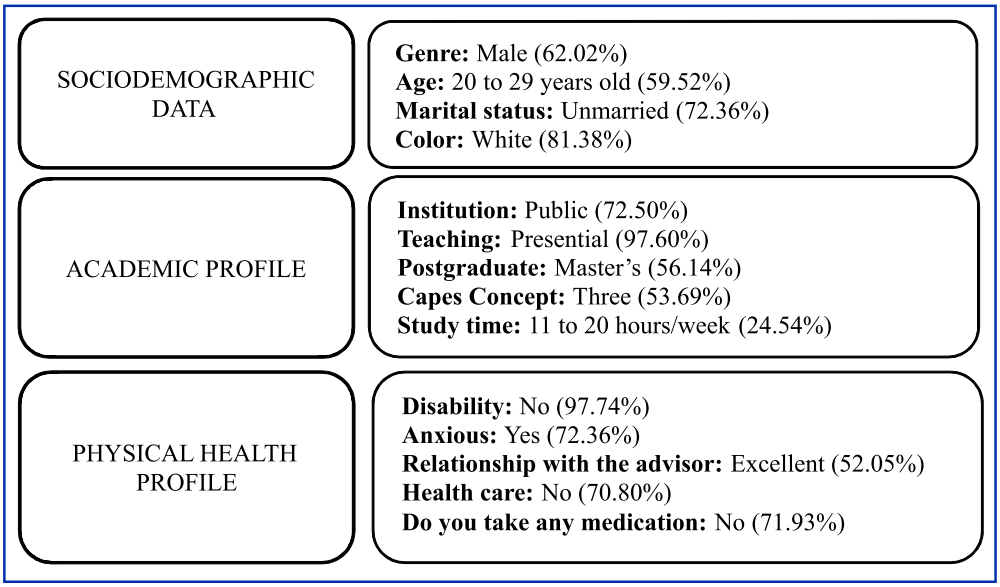
Results

In order to present our findings, the profile of the respondents is discussed, followed by descriptive statistics for the constructs of career adaptability and anxiety symptoms; the relationship between the dimensions of career adaptability and anxiety symptoms is then demonstrated.

PROFILE OF THE SURVEYED GRADUATE STUDENTS

The socio-demographic and academic profile of the sample of 709 graduate students is summarized below (Figure 1).

Figure 1 Summary of the sociodemographic profile of the respondents



Source: Prepared by the authors.

By analyzing Figure 1, one can note that the sample is predominantly male (62.02%), between 20 and 29 years old (59.52%), single (72.36%), and white (81.38%). As for the academic profile, the respondents are mostly from public institutions and attend on-site master's degrees in programs with a Capes evaluation grade of three.

Even though the students mostly have an excellent relationship with their advisors (52.05%), they declared themselves anxious (72.36%). For the graduate students surveyed, most do not have disabilities. In addition, 29.2% are undergoing some kind of medical treatment, and 17.07% are taking some medication. Table 2 lists the result of the mean and standard deviation for the respondents' profiles.

Table 2 Result of the mean and standard deviation of the sociodemographic profile

Sociodemographic and academic profile Mean (Standard Deviation)	
Age	30.45 (7.88) years old
Academic Profile	
Study time	28.21 (8,22) hours/week

Source: Prepared by the authors.

The average age is 30.45 years (minimum age of 21 and maximum of 75) and the average time spent studying is 28.21 hours a week (Table 2). The descriptive statistics of the constructs studied are presented below.

DESCRIPTIVE STATISTICS FOR CAREER ADAPTABILITY AND ANXIETY SYMPTOMS

Initially, the incidence of career adaptability, followed by trait and state anxiety symptoms of graduate students, are analyzed. For this, eachaspect's means and standard deviations were considered and the frequency of the survey responses. Table 3 shows the results for the career adaptability indicators.

Table 1 Frequency, mean and standard deviation of career adaptability indicators

Indicators	Frequency*					Mean	Standard Deviation
	1	2	3	4	5		
Preoccupation						4,00	0,897
1. Think about what my future will be like.	4	39	139	**281**	246	4,02	0,902
2. Realizing that today's choices shape my future.	6	17	95	291	**300**	**4,21**	**0,827**
3. Prepare for the future.	4	38	152	**303**	212	3,96	0,882

4. Becoming aware of the educational and vocational choices that I must make.	3	29	111	**327**	239	4,09	0,830
5. Planning how to achieve my goals.	7	60	168	**285**	189	3,83	0,950
6. Concerned about my career.	2	65	156	**294**	192	3,86	0,930
Control						3,87	0,996
1. Keeping upbeat.	34	141	**316**	152	66	3,11	0,984
2. Making decisions by myself.	9	53	180	**320**	147	3,77	0,906
3. Taking responsibility for my actions.	0	13	46	223	**427**	**4,50**	**0,700**
4. Sticking up for my beliefs.	7	24	139	**283**	256	4,07	0,882
5. Counting on myself.	18	58	186	**230**	217	3,80	1,043
6. Doing what's right for me.	5	30	155	**298**	221	3,99	0,874
Curiosity						**3,70**	**0,945**
1. Exploring my surroundings.	9	98	**255**	241	106	3,47	0,950
2. Looking for opportunities to grow.	4	46	183	**267**	209	**3,89**	**0,923**
3. Investigating options before making a choice.	6	69	187	**267**	180	3,77	0,965
4. Observing different ways of doing things.	4	67	238	**277**	123	3,63	0,896
5. Probing deeply into questions that I have.	8	81	222	**270**	128	3,61	0,947
6. Becoming curious about new opportunities.	5	55	177	**291**	181	3,82	0,922
Confidence						**3,97**	**0,893**
1 - Performing tasks efficiently.	10	41	172	**300**	186	3,86	0,919
2 - Taking care to do things well.	3	20	104	288	**294**	4,20	0,821
3 - Learning new skills.	6	74	203	**279**	147	3,69	0,944

4 - Working up to my ability.	2	21	73	289	**324**	**4,28**	**0,789**
5 - Overcoming obstacles.	4	45	175	**296**	189	3,88	0,897
6 - Solving problems.	3	31	172	**322**	181	3,91	0,839

* 1 = Not strong; 2 = Somewhat strong; 3 = Strong; 4 = Very strong; 5 = Strongest

Source: Prepared by the authors.

One can observe that the mean index of the dimension Concern was 4.00 (0.897), indicating that in the respondents' perception, the existence of the "very good" perception of this skill (Table 3). It is worth noting that excess concern can trigger diseases such as anxiety disorder and depression (COSTA; NEBEL, 2018). The question "Realize that my future depends on today's choices" obtained the highest mean of this dimension — 4.21 (0.827), demonstrating that students are "much more" concerned about their future careers and that it will depend on their choices of the moment and opportunities. This corroborates Dutra (2018), who stated that more realistic choices begin at 17, a stage in which individuals begin to recognize themselves and focus on a particular area among the various options. Therefore, in the graduate stage, students have this perception of how much the choices of the present impact the future.

For the Control dimension, the mean was 3.87 (0.996), also indicating a "very well" developed skill. Control is an essential skill that is part of the development of career adaptation, positively impacting changes that may arise and the manifestation of new skills (NOTA et al., 2014). The statement "take responsibility for my actions" received the highest mean of the dimension 4.50 (0.70), showing that being a graduate student, the student feels much more mature, being able to perform tasks without being required to do so by their advisors. This result is in line with the characteristics of the control dimension studied by Savickas (2005), who stated that the individual feels responsible for building their career, presenting an active and assertive posture to face situations along this path.

For the Curiosity dimension, the mean was 3.70 (0.945). Most of the respondents demonstrated that they had developed this skill very well. The question "Search for opportunities for personal growth" reached the highest mean - 3.89 (0.923), indicating that the graduate student aims "very well" for personal growth and oppor-

tunities aimed at a professional and academic career. Exploring becomes increasingly essential in the labor market, which has been demanding changes, leading students to explore new scenarios; therefore, it becomes an essential skill for conducting professional life (SILVEIRA, 2013). This result is also supported by Savickas (2005), who adopted the concept of vocational exploration, searching, researching, and experimenting; thus, as the individual advances, they can have clarity about their professional inclinations.

In addition, in the Confidence dimension, the mean score was 3.97 (0.893), which is considered high, with values similar to the previous dimensions. Corroborating our findings, Savickas (2005) pointed out that confidence is the ability to perform activities well, making the best use of one's skills and obtaining assertive results. Regarding the question "Strive to do my best within my abilities," it reached the highest mean - 4.28 (0.789), demonstrating that students have used their abilities and commitment "very well" to do their best in the academic environment aiming for a professional future. According to Savickas (2005), the sense of continuity makes individuals realize that the effort of the present builds the success of the future.

In summary, the four dimensions (concern, control, curiosity, and confidence) had means between 3.7 and 4.21, which in the interpretation of the Likert scale means that they have developed "very well" the skills related to career aspirations because it comes to be a personal desire, is part of a life project, with plans and desires (SILVEIRA, 2013). What is more, we found that the students in the sample had a higher mean in the dimension Concern related to career adaptability, so there is a concern about the labor market.

According to ANPG (2020), this data results from the challenging path added to the unequal opportunities market and the current pandemic scenario. Graduate students are in a hybrid situation: they are students because they are still in the process of formation, and they are workers because they produce most of the country's scientific research. The student has a highly qualified labor force, and besides undergraduate studies, they study for six more years (master's degree plus doctorate) to then enter the labor market, suffering from the impacts of the postponement of the payment of the social security contribution and career development.

As for trait and state anxiety symptoms in graduate students, the frequency of responses, mean and standard deviation of the 40 questions involving the two

inventories were analyzed. These questions were analyzed to verify whether the students have or are developing anxiety symptoms. Table 4 lists the descriptive results for the anxiety symptoms studied.

Table 4 Frequency, mean and standard deviation of anxiety indicators

Indicadores	Frequency*				Mean	Standard Deviation
	1	2	3	4		
Ansiedade-Traço					2,39	0,956
1i. I feel pleasant.	112	**309**	255	33	2,29	0,786
3. I feel like crying.	207	**312**	126	64	2,07	0,910
4. I wish I could be as happy as others seem to be.	212	**220**	174	103	2,24	1,035
8. I feel that difficulties are piling up so that I can not overcome them.	163	**314**	151	81	2,21	0,925
9. I worry too much over something that really doesn't matter.	105	**240**	197	167	2,60	1,004
10i. I am happy.	184	**297**	204	24	2,10	0,821
11. I am inclined to take things hard.	58	**236**	207	208	**2,80**	0,956
12. I lack self-confidence.	177	**270**	147	115	2,28	1,014
13i. I feel secure.	92	191	**321**	105	2,62	0,890
15. I feel blue.	204	**341**	108	56	2,02	0,870
16i. I am contet.	78	222	**311**	98	2,61	0,858
17. Some unimportant thoughts runs throngh my mind and brothers me.	101	**258**	209	141	2,55	0,965
18. I take desappointments so keely that I can't put them out of my mind.	137	**235**	204	133	2,47	1,006
19i. I am steady person.	136	**264**	250	59	2,33	0,878
20. I get in state of tension or turmoil as I think over my recent concerns and interests.	68	**258**	214	169	2,68	0,942

State Anxiety					**2,51**	**0,908**
1i. I feel calm.	45	198	**373**	93	2,73	0,768
2i. I feel secure.	42	218	**350**	99	2,71	0,776
3. I am tense.	67	**307**	265	70	2,48	0,798
4. I am regretfull.	**376**	256	56	21	1,61	0,758
5i. I feel at easy.	66	253	**325**	65	2,55	0,786
6. I feel upset	233	**306**	134	36	1,96	0,849
7. I am presently worrying over possible misfortunes.	48	**276**	250	135	2,67	0,860
8i. I feel rested.	24	115	**347**	223	**3,08**	0,778
9. I feel anxious.	57	236	**255**	161	2,73	0,901
10i. I feel confortable.	135	211	**267**	96	2,46	0,949
11i. I feel self-confident.	53	202	**356**	98	2,70	0,797
12. I feel nervous.	94	**289**	228	98	2,47	0,890
13. I am jittery.	137	**296**	195	81	2,31	0,911
14. I feel high strung.	**253**	224	153	79	2,08	1,007
15i. I am relaxed.	18	124	**375**	192	**3,04**	0,739
16i. I feel contente.	42	192	**365**	119	2,78	0,792
17. I am worried.	39	**275**	254	141	2,70	0,847
18. I feel over-exited and “rastled”.	248	249	**375**	55	2,05	0,976
19i. I feel joyfull.	50	229	**375**	55	2,61	0,731
20i. I feel pleasant.	67	257	**335**	50	2,52	0,762

* For TA: 1 = Almost never; 2 = Sometimes; 3 = Often; 4 = Almost always; For SA: 1 = Not at all; 2 = Somewhat; 3 = Moderately so; 4 = Very much so.

Source: Prepared by the authors.

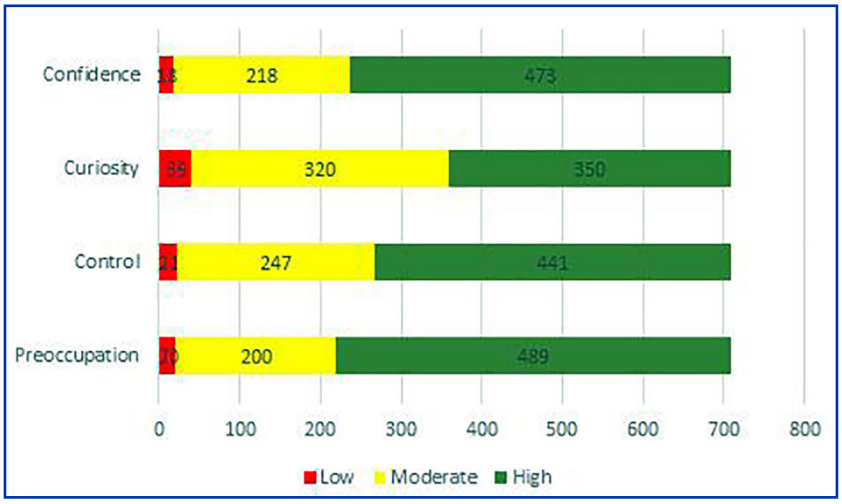
Trait anxiety (STAI-T) is related to the propensity of the individual to deal with more or less anxiety throughout life (FIORAVANTI et al., 2006). In this sense, on a scale from 1 to 4, trait anxiety obtained a lower mean compared to state anxiety, being 2.39 (0.956), showing that "sometimes" students feel anxious (Table 4). Regarding the question with the highest mean, "I am very affected by things," it reached 2.80 (0.956), showing that students "often" have not been able to control their emotions in the face of situations, allowing themselves to be negatively affected by their daily activities. Corroborating this question, APA (2017) stated that anxiety symptoms such as tension and excessive worrying get in the way of personal relationships, studies, and work.

As for state anxiety (STAI-S), which is related to the transient reaction to an adverse situation at a given moment (FIORAVANTI et al., 2006), the mean was 2.51 (0.908). This result shows that students "often" have somewhat anxious reactions. Regarding the question "I feel rested," it obtained the highest mean of this dimension, 3.08 (0.778); according to the STAI, this question should be read inversely (i.e., "often" students feel tired). Desousa et al. (2013) reported that the symptoms of anxiety and fear are essential for the individual's preparation for situations of danger and threat, and anxiety is only considered a disease when it occurs in an exaggerated form.

In general, we found that graduate students perceive that they have anxiety symptoms. By analyzing, in general, the dimensions of career adaptability, concern, control, curiosity, and confidence, and the trait- and state-anxiety inventories, the two dimensions with the highest means were concern and state-anxiety, both have concerning responses, showing that the respondents have had trouble facing this difficult period.

In order to deepen the preliminary analyses between the adopted scales, the CAS, STAI-E, and STAI-S scales were standardized, as established by Lopes (2018). Thus, the ordinal values started to be classified in a ratio scale, being: low (0–33.33%), moderate (33.34–66.66%), and high (66.67–100%). The standardization of the CAS scale is illustrated in Figure 2.

Figure 2 Standardization of CAS aspects



Source: Prepared by the authors.

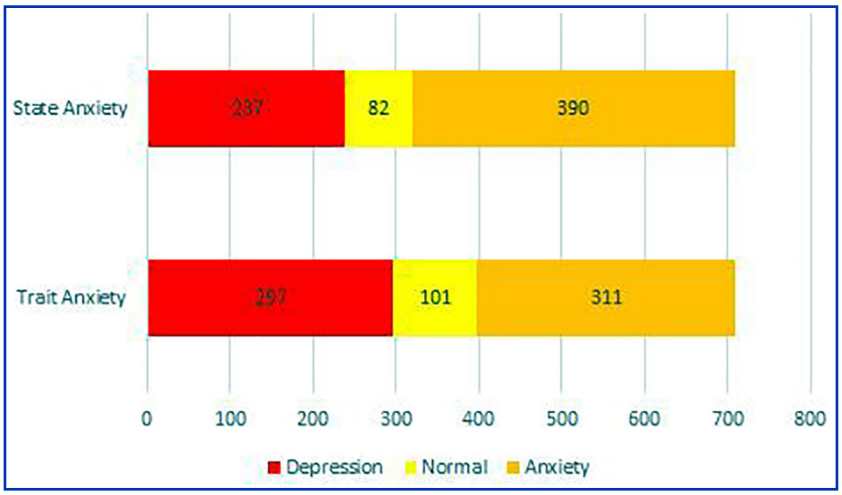
All dimensions were classified with high indices (Figure 2). The dimension concern showed the highest index, indicating that most students, 489 (68.97%), have a sense of orientation about the future (planning, anticipation, and preparation) that, according to Savickas (2005, p. 54), "today's effort builds tomorrow." As for the control dimension, 441 (62.20%) students had a moderate to high level, showing that the presence of control refers to feeling responsible for their careers, making the right choices, and determining their professional future.

For the dimension curiosity 350 (49.37%), most of the respondents presented medium level (i.e., they are not yet with self-knowledge and sufficient knowledge for the professional world); the student needs to have clarity of their professional inclinations and perception of the world of work (JORDAAN, 1963). For confidence, 473 (66.71%) students present a high level, meaning they present abilities to do things right, skills, and abilities to achieve their goals, even in the face of obstacles.

Silveira (2013) reported that individuals with greater career adaptability develop the skills of concern, curiosity, confidence, and control; hence, the high levels indicate that they have good conditions to face the transition from university to work, increasing academic engagement and contributing to their satisfaction as an individual. Other studies have shown that students who have high indices related to

career adaptability identify with the area of training and engage in their career, have greater employability, opportunities, success, and satisfaction in the university-work transition (SANTOS; OLIVEIRA, 2020). The standardization for the STAI-T and STAI--S is presented in Figure 3.

Figure 3 Standardization of STAI-T and STAI-S Inventories



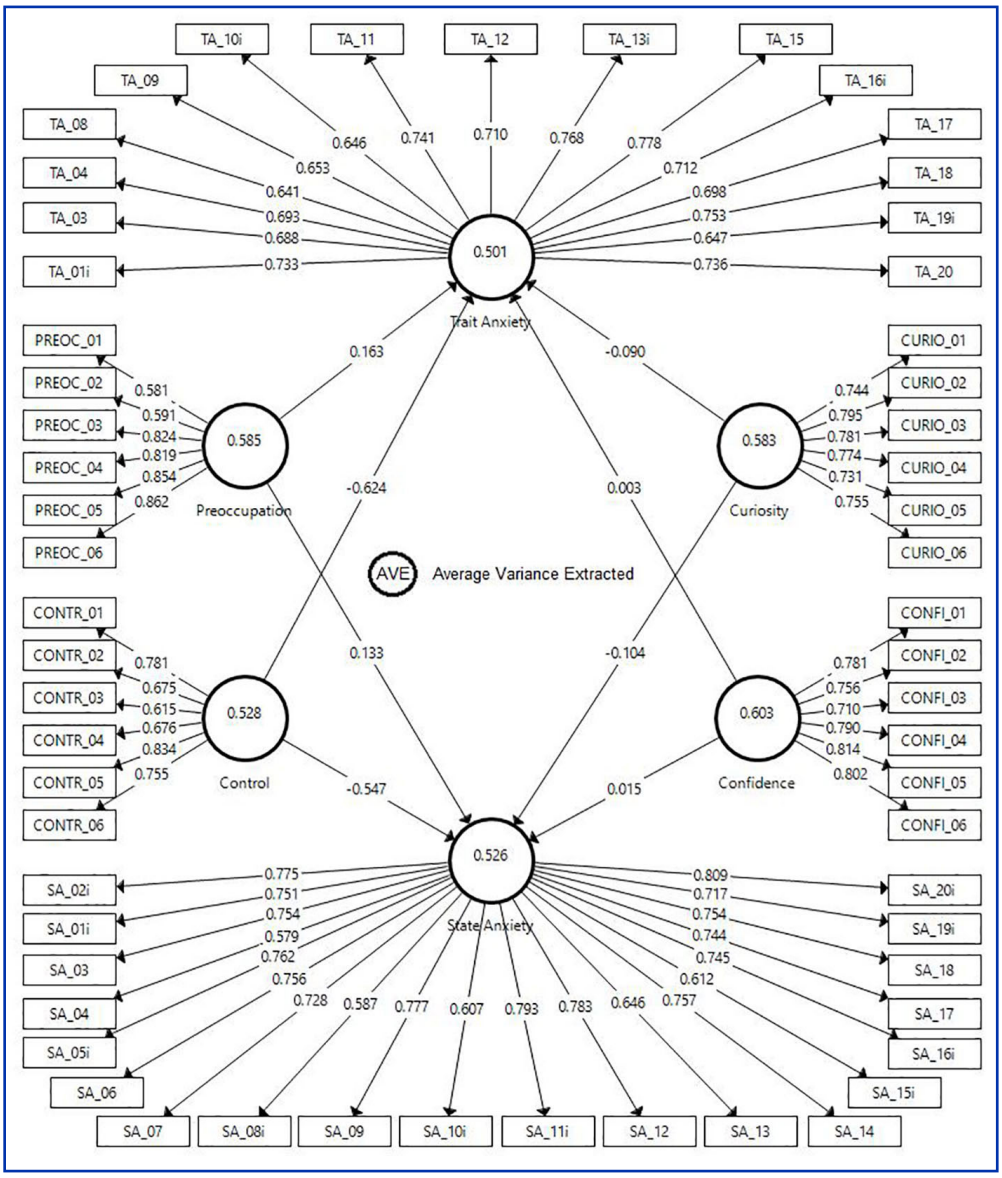
Source: Prepared by the authors.

Based on the results found in the standardization of the STAI-T, we found that of the students participating in this study, 311 (43.87%) had anxiety crises, 297 (41.89%) had depression, and 101 (14.24%) considered themselves normal (Figure 3). Nevertheless, based on the results of the standardization of the STAI-S, we found that of the participants of this study, 390 (55%) presented some anxiety crisis, 237 (33.43%) had depression, and only 82 (11.57%) considered themselves normal. Therefore, students show more state anxiety than trait, that is, students react more to threatening and dangerous situations than usual things (SPIELBERGER, 1985).

RELATIONSHIP BETWEEN CAREER ADAPTABILITY AND ANXIETY SYMPTOMS

Figure 4 details the adjusted path model after excluding some indicators of trait anxiety as they present factorial loadings below 0.6 due to the average variance extracted (AVE) reaching values below 0.5.

Figure 4 Path model of CAS → STAI scale interrelationships



Source: SmartPLS® *Software* v. 3.3.3 (RINGLE; WENDE; BECKER, 2015).

Based on Figure 4, one can observe that 5 VOs of the trait anxiety (TA) dimension were eliminated, making the AVE reach the minimum desired value (i.e., AVE > 0.5) (RINGLE; SILVA; BIDO, 2014). For the other dimensions, even if they present factor loadings below 0.6, sufficient values were verified to reach the minimum values for the assumption of convergent validity and internal consistency.

Therefore, Table 5 shows the evaluation of the measurement model. For this, we used the evaluation of the internal consistency values (Cronbach's alpha [α] and composite reliability [ρ_c]) and also the convergent validity (AVE). As shown in Table 1, the values are within acceptable limits regarding the model's internal consistency and convergent validity.

Table 5 Internal consistency and convergent validity

Dimensions	Cronbach's alpha	Composite Reliability	Average Variance Extracted
State-Anxiety (SA)	0,942	0,947	0,526
Trait-Anxiety (TA)	0,929	0,938	0,501
Confidence (CONF)	0,869	0,901	0,603
Control (CONT)	0,829	0,869	0,528
Curiosity (CUR)	0,858	0,893	0,583
Preoccupation (PRE)	0,874	0,892	0,585

Source: SmartPLS® *Software* v. 3.3.3 (RINGLE; WENDE; BECKER, 2015).

Table 5 shows that internal consistency, both for Cronbach's alpha and composite reliability, showed satisfactory values (0.7 < α < *0.*95 and 0.7 < < 0.95) (HAIR; GABRIEL; PATEL, 2014). Likewise, the AVE showed acceptable values (AVE > 0.5) (RINGLE; SILVA; BIDO, 2014). Therefore, it is inferred that the model presents internal consistency and convergent validity. Next, the discriminant validity of the model was ascertained (Table 6). For this, we applied the Fornell-Larker (FL) test and the heterotrait-monotrait ratio (HTMT) using the bootstrapping method with 5000 subsamples (RINGLE; SILVA; BIDO, 2014).

Table 6 Discriminant validity by Fornell-Larcker and HTMT criteria

Dimensions	√AVE	Pearson's Correlation Matrix (rij)					
		SA	TA	CONF	CONT	CUR	PRE
State-Anxiety	0,725	1,000					
Trait-Anxiety	0,708	0,682	1,000				
Confidence	0,776	-0,332	-0,367	1,000			
Control	0,726	-0,528	-0,584	0,640	1,000		
Curiosity	0,764	-0,385	-0,412	0,682	0,684	1,000	
Preoccupation	0,765	-0,257	-0,271	0,556	0,609	0,625	1,000
		UL (HTMT)$_{97,5\%}$					
State-Anxiety							
Trait-Anxiety		0,946					
Confidence		0,410	0,453				
Control		0,567	0,639	0,799			
Curiosity		0,474	0,511	0,834	0,848		
Preoccupation		0,290	0,308	0,666	0,715	0,734	

Source: SmartPLS® *Software* v. 3.3.3 (RINGLE; WENDE; BECKER, 2015).

According to Table 6, for the FL test, the square roots of the SEM were greater than the correlations between the constructs (FORNELL; LARCKER, 1981). For HTMT, therefore, they should be below 1 (NETEMEYER; BEARDER; SHARMA, 2003). In this sense, the data met this criterion and were therefore validated. Hence, we observed that the criteria of FL and the UL(HTMT)$_{97.5\%}$ (Table 6) confirmed the discriminant validity of the model.

Having evaluated the measurement model, we proceeded to evaluate the structural model. The systematic approach for evaluating the structural model followed the guidelines of Hair et al. (2017). Initially, the structural model was evaluated for collinearity (variance inflation factor [VIF]). The effect size (f^2) and significance level (R^2) were then analyzed. Subsequently, the significance and relevance of the structural model relationships (structural coefficient values (βs) were ascertained. Lastly, the evaluation of the predictive relevance of the model (Q^2) was examined; Table 7 presents the values for VIF, f^2, and R^2.

Table 7 Values of VIF, f2 and R2 for model dimensions

Exogenous Dimensions	Endogenous Dimensions			
	State-Anxiety		Trait-Anxiety	
	VIF	f^2	VIF	f^2
Confidence (CONF)	2,133	0,000 (0,944)	2,133	0,000 (0,998)
Control (CONT)	2,262	0,187 (0,000)	2,262	0,267 (0,000)
Curiosity (CUR)	2,517	0,006 (0,337)	2,517	0,005 (0,386)
Preoccupation (PRE)	1,864	0,013 (0,116)	1,864	0,022 (0,035)
R^2	0,290 (0,000)		0,356 (0,000)	

Source: SmartPLS® Software v. 3.3.3 (RINGLE; WENDE; BECKER, 2015).

The VIF values met the assumptions established by Hair et al. (2017), meaning they did not present collinearity problems in the model (VIF < 5) (Table 7). As for the effect sizes (f^2), which evaluates the usefulness of each endogenous LVs for the model fit (COHEN, 1988; HAIR et al., 2014; LOPES et al., 2020), some dimensions did not present significance ($p > 0.05$) and may influence the significance of the βs that will compose and confirm the proposed hypotheses. As for the coefficients of explanation (R^2), both showed a strong and significant effect ($p < 0.05$) (COHEN, 1988; LOPES et al., 2020), highlighting the dimension of trait anxiety on state anxiety. The relationship between the dimensions and the evaluation of the proposed hypotheses is listed in Table 8.

Tabela 8 Relationships between the latent variables of the model

Hypothesis	Exogenou Dimension	→	Endogenous Dimensions	β	Standard Deviation	T statistic |β / S. D.|	p-value
H_1	PRE	→	AE	0,133	0,042	3,143	0,002
H_2	CONT	→		-0,547	0,043	12,704	0,000
H_3	CONF	→		0,015	0,045	0,333	**0,739**
H_4	CUR	→		-0,104	0,052	2,012	0,044

H_5	PRE	→	AT	0,163	0,039	4,150	0,000
H_6	CONT	→		-0,624	0,040	15,649	0,000
H_7	CONF	→		0,003	0,042	0,062	**0,950**
H_8	CUR	→		-0,090	0,049	1,844	0,065

Source: SmartPLS® *Software* v. 3.3.3 (RINGLE; WENDE; BECKER, 2015).

Based on Hair, Gabriel, and Patel (2014), the confidence dimension (CONF) does not relate significantly with state anxiety (SA) or trait anxiety (TA), which refutes hypotheses H_3 and H_7; curiosity (CUR) does not relate to TA ($p > 0.05$), which rejects hypothesis H_8 (Table 8). Nevertheless, concern (CON) relates positively with anxiety (SA and TA), supporting hypotheses H_1 and H_5; and control (CONT) relates negatively with anxiety (SA and TA), which supports hypotheses H_2 and H_6. Additionally, curiosity (CUR) relates negatively with SA ($p < 0.05$), promoting the acceptance of hypothesis H_4 (HAIR; GABRIEL; PATEL, 2014).

Retrieving the supported hypotheses, state anxiety is positively influenced by concern (H_1) and negatively influenced by control and curiosity (H_2 and H_4, respectively); trait anxiety is positively determined by concern (H_5) and negatively by control (H_6). However, H_3 (confidence relates to state anxiety), H_7 (confidence relates to trait anxiety), and H_8 (curiosity relates to trait anxiety) were not supported in the present study.

As for predictive relevance (Q^2), state and trait anxiety showed a moderate degree of prediction (Table 9) (CHIN, 2010; HAIR et al., 2017; LOPES et al., 2020).

Tabela 9 Q^2 values for the final model

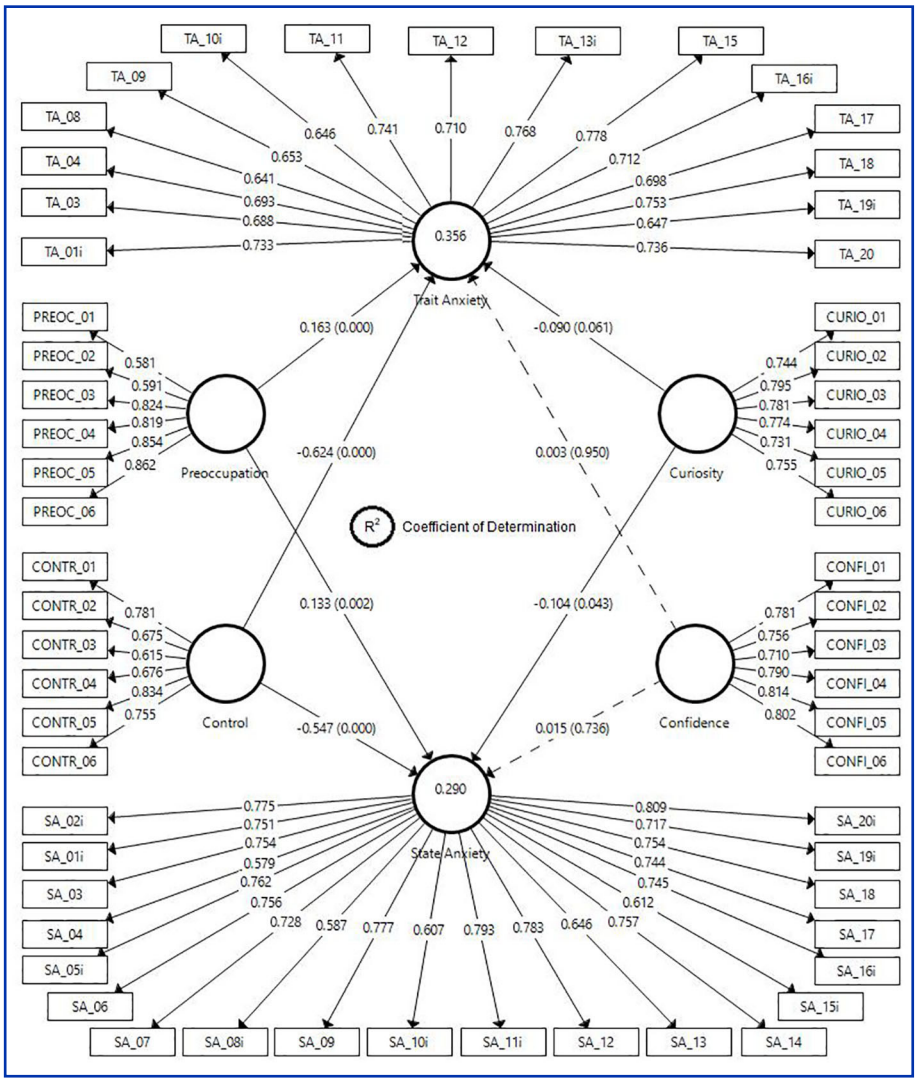
Predictive dimensions	SSO	SSE	$Q_2 = 1 - \frac{SSE}{SSO}$
State anxiety	14.180,00	12.133,26	0,144
Trait anxiety	10.635,00	8.805,60	0,172

SSO = Sum of Squares Observed; SSE = Sum of Squares Error

Source: Smart PLS software® v. 3.3.3 (RINGLE; WENDE; BECKER, 2015).

From these results, it is implied that the relationship between career adaptability (CA) and the trait- and state-anxiety inventories (STAI) are relevant and expressive, meaning that out of the eight proposed hypotheses, three were rejected and five were accepted (Figure 5).

Figura 5 Final path model of the CAS → STAI dimensions



Source: SmartPLS® *Software* v. 3.3.3 (RINGLE; WENDE; BECKER, 2015).

Given these findings, we can conclude that there is a relationship between the dimensions of career adaptability and anxiety symptoms triggered in graduate students (Figure 5). The path model of TA dimensions is directly related to "concern" (CON) and inversely related to "control" (CONT), and both dimensions explain 35.6% of TA. Nevertheless, SA is inversely related to the dimensions "control" (CONT) and "curiosity" (CUR) and directly related to "concern" (CON); such dimensions explain 29% of SA. The final structural path model (Figure 5 and Equations 3 and 4) shows the positive and significant relationships ($p < 0.05$ and $t_{calc} > 1.96$) among the constructs:

$$\text{Trait Anxiety (TA)} = 0{,}163\ \text{PRE} - 0{,}624\ \text{CONT} + \varepsilon_{AT} \quad (3)$$

$$\text{State Anxiety (SA)} = 0{,}133\ \text{PRE} - 0{,}547\ \text{CONT} - 0{,}104\ \text{CUR} + \varepsilon_{AE} \quad (4)$$

Lopes et al. (2020) evaluated students from two Mercosur countries and found that one of the anxiety symptoms is concern, fear, and stress. The authors also reported that 75% of the respondents presented anxiety symptoms. In fact, Gundim et al. (2021) conducted a study in China with students and revealed that 70% were worried about the possibility of family members contracting COVID-19, also presenting reactions such as anxiety, stress, anger, grief, and guilt. Additionally, Marques (2017) researched young students and athletes and found that those with emotional control, self-confidence, and positive thoughts have greater anxiety control, showing improvements in school evaluations.

Given the quantitative results, the graduate students surveyed have high anxiety indices. Thus, raising students' awareness of seeking help from health experts is of the utmost importance. The institution must adopt effective strategies to prevent anxiety and help students cope with it. Unfortunately, few students seek help, and less than 30% reported undergoing any medical treatment and, according to our findings, over 80% showed symptoms of anxiety and depression. This demonstrates the need for the mental health sectors of the surveyed higher education institutions to be concerned about this disease, especially in the face of the COVID-19 pandemic still rampant.

Conclusion

Career adaptability refers to mastering occupational transition tasks and adjusting to the labor market amidst uncertainties. In the graduate career, countless students claim that the academic routine has become burdensome, with papers to deliver, dissertation/thesis, articles to read, and short deadlines, leading to diseases such as anxiety and depression. Based on the evidence provided herein, anxiety symptoms were recognized as present in the academic context; hence, it is crucial to analyze and propose strategic actions to prevent and mitigate existing cases since they affects the university and the individual.

Considering these perceptions, the overall objective of this study was to analyze the relationship between career adaptability and anxiety symptoms triggered in graduate students. For this, data were collected through the research protocol formed by three parts: the socio-demographic profile, career adaptability scale (CAS), and the trait- and state-anxiety inventories (STAI-T and STAI-S), which were applied to 709 graduate students from higher education institutions throughout Brazil.

Initially, the percentages related to the participants' socio-demographic data were obtained, giving us an overview of some characteristics of the sample studied. Among the socio-demographic data, most participating students are men, aged between 20 and 29 years, single, and self-declared white. As for the academic profile, it is noteworthy that the majority are doing a master's degree in a public institution and go to class on-site. The predominant Capes concept grade was three, and participants stated that they study from 11 to 20 hours a week. As for the physical profile, the participants generally have no disabilities, consider themselves anxious, have an excellent relationship with their advisor, do not undergo medical treatment, and do not take medications for health treatment.

From this, we sought to assess the incidence of career adaptability experienced by graduate students. The four skills developed well to very well, emphasizing concern, so the students worry about the labor market. It is worth noting that excessive concerns can trigger diseases such as anxiety disorder.

Next, the incidence of trait- and state-anxiety symptoms in graduate students was identified, and we observed through the analysis of the mean of each factor that the students who participated in the study claimed to suffer from anxiety. For

STAI, they showed to have anxiety (43.87%) and depression (41.89%). For STAI, the participants reported having symptoms of anxiety (55%) and depression (33.43%). These data match the highest mean in career adaptability, which was the dimension concern, which is one of the main symptoms of anxiety, contemplating questions such as "I let myself be affected a lot by things," "I feel tired," and "I am not relaxed."

This result is consistent with data from the WHO report (2017), which states that Brazil is a country of anxious people, in addition to the study of Lopes et al. (2020), which showed that it is necessary to strengthen and improve measures for prevention and treatment of anxiety symptoms in the institutions surveyed. In this sense, graduate programs and the respective educational institutions must invest in raising awareness of their students through information, lectures, greater monitoring of health professionals, and greater disclosure of the sectors of reception and treatment of these students, enabling mitigation and prevention of symptoms before they develop into other diseases or even put the lives of students at risk, ensuring a healthier academic life.

The statistical technique called partial least squares structural equation modeling (PLS-SEM) was used to answer the fourth objective of this study, which focused on relating the constructs of career adaptability with trait anxiety and state in graduate students. Initially, a structural model was proposed by developing eight research hypotheses and specifying the measurement model, representing the relationships between the constructs (latent variables) and their corresponding observed variables. To obtain greater accuracy of the measurement model, we followed a systematic evaluation by assessing internal consistency, convergent validity, and discriminant validity. For the same purpose, the structural model was evaluated for collinearity, significance and relevance of the relationships, effect size f^2, and predictive relevance. The results supported the relationships between the career adaptability scale and the trait- and state-anxiety inventories. Moreover, we found that trait anxiety is determined positively by concern and negatively by control, whereas state anxiety is determined positively by concern and negatively by control and curiosity. Thus, of the eight hypotheses developed, three were rejected and five were accepted.

These results lead us to conclude that for the sample of this study, there is a relationship between career adaptability and anxiety symptoms. The aspect with the most accepted hypotheses was state anxiety, which was related to Concern, Control,

and Curiosity. As for trait anxiety, it was only related to Concern and Control. Hence, from the presented relations, only Concern has a relation and influence in the increase of anxiety, while control and curiosity, the higher they are, the lower the anxiety levels. Nevertheless, the trust dimension was not related to trait anxiety or state anxiety, and the curiosity dimension had no relationship with trait anxiety in students.

There is a need to raise awareness about prevention and increase cases of students with anxiety symptoms due to the damage caused by this disease, as well as the importance of adopting effective strategies for coping. UFSM must engage in the creation of prevention, containment, and intervention measures for anxiety symptoms from the perspective of building more humanized and healthier care environments. Therefore, we suggest more frequent group meetings and therapy, follow-up by the health team to monitor the cases that worsened in the academic environment, and lectures and newsletters to discuss the theme.

This study has distinct theoretical, practical, and social potential contributions. To date, no other study has evaluated the relationship between anxiety disorder and career adaptability in graduate students in the Brazilian context. Thus, there is a research gap that may theoretically contribute to advancing the literature on behavioral issues; this study filled this gap by helping in the theoretical understanding of anxiety disorders and career adaptability during the COVID-19 pandemic. Moreover, in a practical way, our study aims to shed more light on graduate students' mental and behavioral aspects regarding career adaptability and the impact on anxiety. Therefore, we foresee informational and mapping contributions for educational institutions, professional associations, and organizations in the sector in order to enable better training of future professionals. Socially speaking, our findings contribute to improving management practices that seek to preserve health and develop skills in Brazilian graduate students. In fact, this study can help managers regarding the measures to be taken, especially those aimed at the well-being and health of graduate students.

Despite our promising findings, the limitations of this study include adopting a questionnaire that, to some extent, restricts the validity of the results because there may be other variables that influence the verification of anxiety dimensions and other variables that determine career adaptability, which was not considered. The instrument did not encompass specific questions related to COVID-19, so it

was not possible to infer whether the results have changed due to the pandemic. Another limitation is the scarcity of research associating career adaptability with anxiety symptoms, especially in graduate studies. The time frame of the research (cross-sectional) can also be considered a limiting factor. In addition, we report the difficulty in reliably estimating the size of the population of Brazilian graduate students. Lastly, data collection occurred only online during the COVID-19 pandemic, a period in which not all students had access to the Internet and computers.

Therefore, the results found, although specific to Brazilian graduate students, can be analyzed, compared, and inspire further research in other countries, which will contribute to and encourage the development of studies focused on behavior and mental health. For future research, we suggest adopting different means of data collection, such as in-depth interviews with these students and considering different variables for analysis, aspects related to culture, or professional training. The theoretical deepening of the constructs of anxiety and career adaptability are motivated, given their great importance. Future studies may replicate this study and segregate the students by national regions or work areas. Finally, future researchers can associate the socio-demographic profile with career adaptability and anxiety symptoms to better understand the dependency relationships.

References

ASSOCIAÇÃO MÉDICA DE PSIQUIATRIA - APA. **What Are Anxiety Disorders?** 2017. Disponível em: <https://www.psychiatry.org/patients-families/anxiety-disorders/what-are-anxiety-disorders>. Acesso em: 20 de agosto de 2021.

ASSOCIAÇÃO NACIONAL DE PÓS-GRADUAÇÃO - ANPG. **Depressão na pós-graduação:** é preciso falar sobre isso, 2018. Disponível em: <http://www.anpg.org.br/14/09/2018/depressao-na-pos-graduacao-e-preciso-falar-sobre-isso>. Acesso em 01 de novembro de 2021.

BARROS, B. P.; NISHIURA, J. L.; HEILBERG, I. P.; KIRSZTAJN, G. M. Ansiedade, depressão e qualidade de vida em pacientes com glomerulonefrite familiar ou doença renal policística autossômica dominante. **Brazilian Journal of Nephrology**, v. 33, n. 2, p. 120-128, 2011.

BIAGGIO, A. M. B.; NATALÍCIO, L**. Manual para o Inventário de Ansiedade Traço-Estado (IDATE).** Centro Editor de Psicologia Aplicada - CEPA, Rio de Janeiro, 1979.

CAMARGO, I. S. **Gestão de carreira no início da carreira profissional:** um estudo sobre atitude de carreira de jovens discentes da graduação da FEA/USP. Tese (Doutorado em Administração), Universidade de São Paulo, SP, 2016.

CHIN, W. W. How to Write Up and Report PLS Analyses. In: Esposito VINZI, V.; CHIN, W. W.; HENSELER, J.; WANG, H. Eds., **Handbook of Partial Least Squares**: Concepts, Methods and Applications, Springer, Heidelberg, Dordrecht, London, New York, p. 655-690, 2010.

COHEN, J. **Statistical Power Analysis for the Behavioral Sciences**. 2. ed. New York: Psychology Press, 1988.

COSTA, E. G.; NEBEL, L. O quanto vale a dor? Estudo sobre a saúde mental de estudantes de pós-graduação no Brasil. **Revista Polis**, Santiago, v. 17, n. 50, p. 207-227, 2018.

DESOUSA, D. A.; MORENO, A. L.; GAUER, G.; MANFRO, G. G.; KOLLER, S. H. Revisão sistemática de instrumentos para avaliação de ansiedade na população brasileira. **Revista Instituto Brasileiro de Avaliação Psicológica,** Porto Alegre, v. 12, n. 3, p. 397-410, 2013.

DUTRA, J. S. **Gestão de carreiras:** a pessoa, a organização e as oportunidades. 2. ed. São Paulo: Atlas, 2017.

DUTRA, J. S. **Gestão de pessoas: modelos, processos tendências e perspectivas**. 2. ed. São Paulo: Atlas, 2018.

EVANS, T. M.; BIRA, L.; GASTELUM, J. B., WEISS, L. T.; VANDERFORD, N. L. Evidence for a mental health crisis in graduate education. **Revista Nature Biotechnology,** v. 36, n. 3, p. 282-284, 2018.

FIELD, A. **Descobrindo a estatística usando o SPSS**. 2. ed. Porto Alegre: Artmed, 2009.

FILGUEIRAS, A.; STULTS-KOLEHMAINEN, M. The relationship between behavioural and psychosocial factors among brazilians in quarantine due to Covid-19. **The Lancet Psychiatry**. 2020. Disponível em: <https://ssrn.com/abstract=3566245>. Acesso em: 11 jan. 2022.

FIORAVANTI, A. C. M.; SANTOS, L. F.; MAISSONETTE, S. M.; CRUZ, A. P.; FERNANDEZ, J. L. Avaliação da Estrutura Fatorial da Escala Ansiedade–Traço do IDATE. **Avaliação Psicológica**, Rio de Janeiro, v. 5, n. 2, p. 217-224, 2006.

FIORINI, M. C.; BARDAGI, M. P.; SILVA, N. Adaptabilidade de carreira: paradigmas do conceito no mundo do trabalho contemporâneo. **Revista Psicologia Organizacional do Trabalho**. Brasília, v. 16, n. 3, p. 236-247, 2016.

FORNELL, C.; LARCKER, D. F. Evaluating structural equation models with unobservable variables and measurement error. **Journal of Marketing Research**. v. 18, n. 1, p. 39-50, 1981.

GIL, A. C. **Como elaborar projetos de pesquisa**. 6. ed. 2. reimpr. São Paulo: Atlas, 2018.

GUNDIM, V. A.; ENCARNAÇÃO, J. P.; SANTOS, F. C.; SANTOS, J. E.; VASCONCELLOS, E. A.; SOUZA, R. C. Saúde mental de estudantes universitários durante a pandemia de covid-19. **Revista baiana de enfermagem,** v. 35, p. 1-14, 2021.

HAIR, J. F.; GABRIEL, M. L. D. S.; PATEL, V. K. Modelagem de Equações Estruturais Baseada em Covariância (CB-SEM) com o AMOS: Orientações sobre a sua aplicação como uma Ferramenta de Pesquisa de Marketing. **Revista Brasileira de Marketing**, v. 13, n. 2, p. 44-55, 2014.

HAIR, J. F.; HULT, G. T. M.; RINGLE, C.; SARSTEDT, M. **A primer on partial least squares structural equation modeling (PLS-SEM)**. Los Angeles: Sage publications; 2017.

HAIR, J. F.; WILLIAM, B.; BABIN, B.; ANDERSON, R. E. **Análise multivariada de dados.** 6. ed. Porto Alegre: Bookman, 2009.

JORDAAN, J. P. Exploratory behavior: The formation of self and occupational concepts. In: SUPER, D.; STARISHEVSKY, R.; MATLIN, N.; JORDAAN, J. P. (Ed.) **Career development:** Self-concept theory: Essays in vocational development. New York: College Entrance Examination Board. p. 42-78, 1963.

LOPES, L. F. D. **Métodos Quantitativos Aplicados ao Comportamento Organizacional**. 1. ed. Santa Maria: Editora Voix, 2018.

LOPES, L. F. D.; CHAVES, B. M.; FABRICIO, A.; ALMEIDA, D. M.; OBREGON, S. L.; LIMA, M. P.; SILVA, W. V.; CAMARGO, M. E.; VEIGA, C. P.; MOURA, G. L.; SILVA, L. S. C. V.; COSTA, V. M. F. Analysis of Well-Being and Anxiety among University Students. **Int. J. Environ. Res. Public Health.** v. 17, n. 3874, p. 1-23. 2020.

LORICCHIO, T. M. B.; LEITE, J. R. Estresse, ansiedade, crenças de autoeficácia e o desempenho dos bacharéis em Direito. **Avaliação Psicológica,** v. 11, n. 1, p. 37-47, 2012.

MAGALHÃES, M. O. Propriedades psicométricas da versão brasileira da escala de comprometimento com a carreira. **Psicologia: Ciência e Profissão**, v. 33, n. 2, p. 304-317, 2013.

MARQUES, I. M. **Níveis de ansiedade pré-competição em atletas da modalidade de atletismo do município de Tubarão-SC**. Trabalho de Conclusão de Curso (Educação Física Bacharelado), Universidade do Sul de Santa Catarina, Tubarão, 2017.

NASCIMENTO, J. C. H. B.; MACEDO, M. A. S. Modelagem de equações estruturais com mínimos quadrados parciais: um exemplo da aplicação do SmartPLS® em pesquisas em Contabilidade. **Revista de Educação e Pesquisa em Contabilidade**, v. 10, n. 3, 2016.

NETEMEYER, R. G.; BEARDEN, W. O.; SHARMA, S. **Scaling procedures**: issues and applications. Thousand Oaks: Sage. 2003.

NOTA, L.; GINEVRA, M. C.; SANTILLI, S.; SORESI, S. **Construção de carreira contemporânea: O papel da adaptabilidade da carreira** Meta-capacidades de carreira psico-social. Springer, p. 247-263, 2014.

ORGANIZAÇÃO MUNDIAL DA SAÚDE - OMS. **ONU destaca necessidade urgente de aumentar investimentos em serviços de saúde mental durante a pandemia de COVID-19**, 2020. Disponível em: **<**OPAS/OMS Brasil - ONU destaca necessidade urgente de aumentar investimentos em serviços de saúde mental durante a pandemia de COVID-19 (paho.org)>. Acesso em: 21 de agosto de 2021.

PORTO, A. **Áreas da vida no trabalho como preditoras da síndrome de Burnout: tradução, adaptação transcultural e validação do modelo AWS-MBIGS**. Tese (Doutorado em Administração). Universidade Federal de Santa Maria. Santa Maria, 2019.

RINGLE, C. M.; SILVA, D.; BIDO, D. S. Modelagem de equações estruturais com utilização do SmartPLS. **REMark - Revista Brasileira de Marketing**, v. 13, n. 2, p. 56-73, 2014.

RINGLE, C. M.; WENDE, S.; BECKER, J. M. **SmartPLS 3**. Bönningstedt: SmartPLS, 2015.

SANTOS, A. E.; OLIVEIRA, M. C. Análise da adaptabilidade de carreira em estudantes concluintes do ensino superior. **Interação em Psicologia**, v. 24, n. 1, 2020.

SAVICKAS, M. L. The theory and practice of career construction. In: BROWN, S. D.; LENTS, R. W. (eds.), **Career development and couselling**: putting theory and research to work, New Jersey: John Wyley & Sons, p. 42-70, 2005.

SAVICKAS, M. L.; PORFELI, E. J. Career Adapt-Abilities Scale: Construction, reliability, and measurement equivalence across 13 countries**. Journal of vocational behavior,** v. 80, n. 3, p. 661-673, 2012.

SILVEIRA, A. A. **Escala de Adaptabilidade de Carreira:** Evidências de validade e fidedignidade em uma amostra de universitários brasileiros. Dissertação (Mestrado em psicologia). Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, 2013.

SPIELBERGER, C. D. Assessment of state and trait anxiety: Conceptual and methodological issues. **Southern Psychologist**, v. 2, n. 4, p. 6–16, 1985.

TEIXEIRA, M. A. P.; BARDAGI, M. P.; LASSANCE, M. C. P.; MAGALHAES, M.; DUARTE, M. E. Career Adapt - Abilities Scale - Brazilian Forms: Psychometric properties and relationchip to personality. **Journal of Vocacional Behavior,** v. 80, n. 3, p. 80-685, 2012.

UNIVERSIDADE DE BRASÍLIA - UNB. **Sofrimento mental na pós-graduação da Universidade de Brasília:** situação e propostas de soluções, 2018. Disponível em: <Quadro do sofrimento mental de pós-graduandos da Universidade de Brasília (anpg.org.br)>. Acesso em: 20 de junho de 2021.

UNIVERSIDADE FEDERAL DE MINAS GERAIS - UFMG. **Por que estamos ansiosos?** 2020. Disponível em: <Por que estamos ansiosos? - Faculdade de Medicina da UFMG>. Acesso em 20 de outubro de 2020.

ZATTI, F.; LUNA, I. N.; SILVA, N.; FEIGEL, G. L. Desenvolvimento de carreira de estudantes durante a graduação: análise de fundamentos epistemológicos em estudos nacionais. **Revista Psicologia Organizações e Trabalho**, v. 17, n. 3, p. 150-158, 2017.