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Explanatory variables of psychological well-being: a study with postgraduates in Accounting

Variáveis explicativas do bem-estar psicológico: um estudo com pós-graduandos em Ciências Contábeis

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Keywords
Stress.
Coping.
Self-efficacy.
Welfare.
Postgraduates.

Abstract

Previous studies have indicated the high frequency of stressors and stress in graduate studies, however, there is a need to better understand the role of coping strategies in this environment and the impact of all these variables on the well-being of students. Thus, the aim of this study was to evaluate the relationship between stressors and self-efficacy, mediated by stress and coping, in the psychological well-being of graduate students in Accounting. To achieve the aim, an online survey was carried out, with a questionnaire consisting of the Stressors (worries and difficulties), General Self-Efficacy, Perceived Stress, Brief Cope and General Health Questionnaire (to measure well-being) scales, in addition to questions about the respondents' profile. The sample consisted of 366 participants. It was observed that the most stressors show the fear of not achieving good results and the difficulty in reconciling the demands of graduate studies with other aspects of life. On average, students had high self-efficacy and most had a high stress level. The most used coping strategies were active coping, self-blame and positive reinterpretation. With the use of mediation analysis, it was concluded that stressors, as well as self-efficacy, are mediated by stress and by the positive reinterpretation strategy, thus explaining the psychological well-being of graduate students. In this way, the identification of the investigated variables encourages debate and provides support for the planning and execution of institutional actions that aim to alleviate stressors, as well as help students to develop greater adaptive capacity in the face of postgraduate challenges.

Palavras-chave
Estresse.
Enfrentamento.
Autoeficácia.
Bem-estar.
Pós-graduandos.

Resumo

Estudos anteriores indicaram a alta frequência de estressores e estresse na pós-graduação, contudo notou-se a necessidade de compreender melhor o papel das estratégias de enfrentamento nesse ambiente e o impacto de todas essas variáveis no bem-estar dos discentes. Assim, o objetivo deste estudo foi avaliar a relação dos estressores e autoeficácia, mediados pelo estresse e enfrentamento, com o bem-estar psicológico de pós-graduandos em Ciências Contábeis. Para o alcance do objetivo, realizou-se um survey *on-line, com questionário constituído pelas escalas de Estressores (preocupações e dificuldades), Autoeficácia-Geral, Estresse Percebido,* Brief Cope *e Questionário de Saúde Geral (para mensurar o bem-estar), além de questões sobre o perfil dos respondentes. A amostra foi constituída por 366 participantes. Observou-se que os estressores mais frequentes evidenciam o receio de não alcançar bons resultados e a dificuldade em conciliar as demandas da pós-graduação com outros aspectos da vida. Na média, os discentes apresentaram autoeficácia elevada e a maioria apresentou nível alto de estresse. As estratégias de enfrentamento mais usadas foram enfrentamento ativo, autoculpabilização e reinterpretação positiva. Com o uso da análise de mediação, concluiu-se que os estressores, bem como a autoeficácia, são mediados pelo estresse e pela estratégia de reinterpretação positiva, explicando, assim o bem-estar psicológico dos pós-graduandos. Dessa forma, a identificação das variáveis investigadas fomenta o debate e fornece respaldo para o planejamento e execução de ações institucionais que objetivem amenizar estressores, bem como auxiliar os discentes para que eles desenvolvam maior capacidade adaptativa frente aos desafios da pós-graduação.*

Practical implications

The results of this research can alert and support the decision of managers and professors at educational institutions regarding the need to develop institutional actions that contribute to improving the well-being of students and, consequently, provide a more harmonious and attractive experience for those entering graduate school.

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1 INTRODUCTION

Problems relating to the mental health and well-being of *stricto sensu* postgraduate students have attracted the researchers' attention (Hunter & Devine, 2016; Levecque et al., 2017; Pyhältö et al., 2012; Park et al., 2021) who are concerned about the impacts associated with working conditions on the students'psychological condition. In this regard, postgraduate students perceive several stressors, such as the relationship with their supervisor and difficulties in developing their research, as factors that increase their stress level (Bazrafkan et al., 2016) and impair their well-being (Devos et al., 2016; Hunter & Devine, 2016). Excessive academic workload (Cornwall et al., 2018), difficulties in maintaining a balance between academic and personal life (Cornwall et al., 2018; Faro, 2013a; El-Ghoroury et al., 2012), financial problems (El-Ghoroury et al., 2012; Faro, 2013a) and pressure from funding organizations (Waight & Giordano, 2018) also contribute to increased stress.

In general, stressors lead to increased stress levels, which can cause a lack of incentive to continue studying or a reduction in academic performance (Faro, 2013b; Rezende et al., 2017). On the other hand, studies (Bazrafkan et al., 2016; El-Ghoroury et al., 2012) have indicated that the use of some coping strategies, such as seeking social support, can help postgraduates deal with the effects of stressors. And the use of coping can be reinforced by the individual's self-efficacy, which would contribute to controlling the harmful effects of stress (Bandura, 1997). From this perspective, self-efficacy has been suggested as an element with the potential to positively affect well-being (Sonnentag, 2015).

In a general way, this study aims to evaluate the relationship among stressors and self-efficacy with psychological well-being, considering the mediation of the stress level and the use of strategies by graduate students in Accounting. It is understood that this proposal is relevant, since graduate students play a fundamental role in scientific production (Levecque et al., 2017; Oliveira, 2015), and are more susceptible to mental health problems (Evans et al., 2018; Levecque et al., 2017), to suffering negative impacts related to stress, such as loss of motivation (Barry et al., 2018) and greater likelihood of dropping out (Pyhältö et al., 2012). In addition to it, psychological adversity perceived by students can have organizational and social impacts, as they tend to interrupt their projects or change their career plans, which can consequently affect the entire academic community and even society, which is waiting for the results of scientific studies (Levecque et al., 2017).

Finally, it is understood that postgraduate experiences should be investigated in each area of knowledge (Silva & Bardagi, 2015), so we chose to analyze the accounting area. In this regard, we highlight the fact that accounting undergraduates are faced with several professional options, which can generate more anxiety when they decide to dedicate themselves to postgraduate studies, since this choice generates many economic and social costs (Barth & Ensslin, 2014; Meurer et al., 2019). It has also been noted in previous studies that accounting postgraduates have shown symptoms of psychological disorders such as exhaustion (Martins et al., 2021) and anxiety (Meurer et al., 2021; Coelho & Nascimento, 2020) related to difficulties in postgraduate studies and that some stressors (e.g. difficulty in reconciling academic and professional activities) contribute to course dropout (Pereira et al., 2021).

2 THEORETICAL FRAMEWORK

2.1 Stressors, stress, coping and well-being in the academic environment

In the field of psychology, the cognitive theoretical approach to stress presented by Lazarus and Folkman (1984) indicates that stress arises from the interaction among adverse situations (stressors) in the environment and the way the individual deals with these situations, essentially when, in this relationship, the individual's resources are exceeded, putting their well-being at risk. Thus, stress can be perceived as an adaptive process of the human organism in an adversity (Faro & Pereira, 2013). And a stressful situation, or stressors, are stimuli from the environment that can generate a stressful response in individuals (Lazarus & Folkman, 1984).

When discussing stressors and stress in the postgraduate environment, it is pointed out that this is marked by academic productivism, which for students generates negative reflexes about their physical and psychological health (Estácio et al., 2019). In a study with postgraduate students, Faro (2013a) identified the following as the most frequent stressors: pressure to perform well, financial difficulties and schedule compatibility. Similarly, El-Ghoroury et al. (2012) observed that stressors related to problems with finances, lack of balance work and academic life, responsibilities and academic pressures were more common. Other recurring stressors refer to difficulties in preparing research (Devos et al., 2016), dissertations or theses (Park et al., 2021).

When looking specifically at postgraduate studies in Accounting, we highlight the study by Altoé et al.

(2014), which identified symptoms of stress (insomnia, constant tiredness, forgetfulness, muscle tension, anguish, irritability) in students. And Rezende's et al. (2017), which showed that some stressors (interference of studies on other aspects of life, possibility of not achieving the expected performance, time to complete the thesis/dissertation, lack of motivation, making studies compatible with personal and family life) have a significant relationship with the stress level, which was considered high or very high in almost half of those investigated.

From the evidence presented, it can be inferred that the stressors peculiar to postgraduate studies contribute to an increase in stress levels, which consequently leads to a reduction in well-being. Thus, the following hypothesis was established:

H_1: The relationship among stressors and the psychological well-being of graduate students in Accounting is mediated by the stress level.

Broadening the understanding of the cognitive approach to stress, it can be seen that an individual can present or develop behavioral efforts to manage stressors, which is known as coping (Lazarus & Folkman, 1984). In other words, they are the used strategies among the occurrence of a stressful situation and its possible outcomes (Ribeiro & Rodrigues, 2004). Therefore, it should be noted that stressors lead to stress, which, when high, can negatively affect an individual's psychological, emotional or physiological conditions (Carr & Umberson, 2013).

The relationship between stress and health can also be understood by analyzing well-being, as this is a fundamental part of what is meant by health, according to the World Health Organization (2018). Well-being is the individual's experience of feeling good (Soonentag, 2015). Its concept is broad and one of its variations is psychological well-being, which refers to the fullness of a person's functioning, their self-realization (Ryan & Deci, 2001), their development and their potential (Dodd et al., 2021).

Thus, the impact of a stressor will depend on the coping strategies used, which can be classified as: i) problem-focused, which aims to solve what is causing suffering, i.e. modify the stressor, for example, positive reinterpretation; and ii) emotion-focused, which aims to regulate the emotional response, managing the stress during the problem, but not dealing directly with it, for example, self-blame strategy (Lazarus & Folkman, 1984). These two groups are also known as adaptive and maladaptive strategies, respectively (Kasi et al., 2012). Nascimento et al. (2021) found that active coping strategies and behavioral disinvestment were negatively associated with stress, while self-blame and denial were positively associated with stress.

In studies with postgraduates, El-Ghoroury et al. (2012) and Bazrafkan et al. (2016) found that strategies such as support from friends, family, classmates, physical exercise and hobbies were more common. Faro (2013a) identified more problem-focused strategies, social support, emotion-focused strategies and religiosity. The first mentioned contributed significantly to the positive prediction of well-being variability associated with lower stress levels. Freire et al. (2018) found that positive reinterpretation strategies, seeking support and planning were associated with greater well-being.

Long et al. (2021) argue that developing coping can be beneficial to students, and that self-care interventions help to reduce stress (Stillwell et al., 2017). Thus, it is understood that previous research supports the second hypothesis of this study, which is:

H_2: The relationship among stressors and the psychological well-being of graduate students in Accounting is mediated by at least one coping strategy.

2.2 Stress, coping, self-efficacy and well-being in the academic environment

Self-efficacy is an essential element in Social Cognitive Theory (Bandura, 1997). This theory incorporates the perspective of human agency (Bandura, 2001), which highlights the individual's potential to intentionally influence events in their life (Bandura, 2008). It assumes the existence of an efficacy belief system which is personal and relate to different human actions, as well as thoughts, motivation and affective and physiological conditions (Bandura, 1997).

Self-efficacy indicates an individual's self-assessment of their ability to carry out certain actions or their skills in several situations (Bandura, 1997). According to Bandura (2004), a greater perception of self-efficacy leads individuals to better plan their goals and commit to achieving them. So, high self-efficacy favors the way

people deal with challenges, making them more persistent, and can contribute to motivation to use coping strategies (Schwarzer & Hallum, 2008). On the other hand, individuals with a low perception of self-efficacy are more likely to give up trying to overcome a challenge (Bandura, 2004), and are more concerned with the difficulties than with possible ways of resolving them.

When considering the challenges of the academic environment, the relationship between self-efficacy and stress has been evaluated in studies with university students, for example in the studies by Saleh et al. (2017) in France, Shilpa and Prasad (2017) in India and Bodys-Cupak et al. (2016) in Poland, all of which identified that self-efficacy and stress are inversely associated. Furthermore, Shilpa and Prasad (2017) emphasize the importance of developing students' sense of self-efficacy in order to mitigate stress-related problems. Other authors have investigated how self-efficacy is related to coping strategies. Bodys-Cupak et al. (2016), for example, found that higher perceived self-efficacy was associated with greater use of active coping, planning, positive reinterpretation, acceptance and seeking emotional support. Crego et al. (2016) also found that strategies characterized as rational (e.g. positive reinterpretation, seeking social support) were positively associated with self-efficacy.

In addition to it, the positive correlation between self-efficacy and well-being stands out, according to a study by Priesack and Alcock (2015). Similarly, Jackman and Sisson (2021) conducted interviews with recently graduated doctors in England and observed that self-efficacy was mentioned as one of the factors contributing to well-being during the doctorate. In the participants' perception, the high well-being happened when they perceived greater self-efficacy and more confidence in their own abilities to complete their doctorate, as a result of which they were able to perceive less stress and thus succeed in what they wanted to achieve.

Thus, from the research presented, self-efficacy is understood as a resource that shows the beliefs that individuals have about themselves, and can therefore affect their behavior, as well as the possible use of coping strategies, which is indicated in the following hypotheses:

H_3: The relationship between general self-efficacy and the students'psychological well-being in Accounting is mediated by the stress level.

H_4: The relationship between general self-efficacy and the students' psychological well-being in Accounting is mediated by at least one coping strategy.

3 METHODOLOGICAL ASPECTS

The population of this study is all students enrolled in *stricto sensu* postgraduate programs in Accounting Sciences listed on the Sucupira Platform (10/2020). Data was collected by applying a questionnaire hosted on the SurveyMonkey® platform, consisting of seven sections, which allocate the two stressor scales (Faro, 2013b); Perceived Stress Scale (Cohen et al., 1983), translated and validated by Luft et al. (2007); Brief COPE (Carver et al., 1989), translated and validated by Maroco et al. (2014); General Perceived Self-Efficacy Scale (Schwarzer & Jerusalem, 1995), translated and validated by Sbicigo et al. (2012); General Health Questionnaire (Goldberg & Williams, 1972), translated and validated by Gouveia et al. (2003), as well as questions to characterize the respondents. A pre-test was carried out with sixteen people (Masters and PhDs in Accounting). It was noted that there were doubts about some of the questions, and additional information was added to make the objective of the question clearer.

The research project was submitted to the ethics committee and received ethical approval, as registered at 29141019.9.0000.5152. At this point, the data was collected and distributed to students by the course coordinators (e-mail provided on the course websites) or the course secretaries, if the coordinators did not get back to us. To a lesser extent, some student contacts were identified on program websites, and in these cases the email was sent directly to them. The collection period was from October and December 2020. A total of 366 valid responses were obtained, which correspond to the research sample.

The data were analyzed in two stages: descriptive statistics in order to systematically demonstrate the investigated variables and mediation analysis, with the constructs formed by each scale score, which made it possible to test the research hypotheses. Mediation is based on a causal model in which there is a relationship among at least three variables (Baron & Kenny, 1986). Thus, it is expected that there will be: a path a between an independent variable (X) and a mediating variable (M); a path b from M to the dependent variable (Y); and a path c' which shows the direct relationship between X and Y with the effect adjusted from M. It is also important to note that, in the absence of other variables, X and Y could be related through path c (Mackinnon, 2008).

When analyzing a mediation model, it is considered that there are both direct effects (c') and indirect or mediated effects (ab). These effects will also be analyzed with the total effects (c), which can be understood by the path c which, in mediation, would be composed of the paths c' and the interaction of paths a and b (Mackinnon, 2008). In this study, Figure 1 shows all these paths, the relationship among the independent variables (stressors and self-efficacy) and the dependent one (well-being) and this same relationship after inserting the mediating variables (stress and the fourteen coping strategies) among the independent and dependent variables.

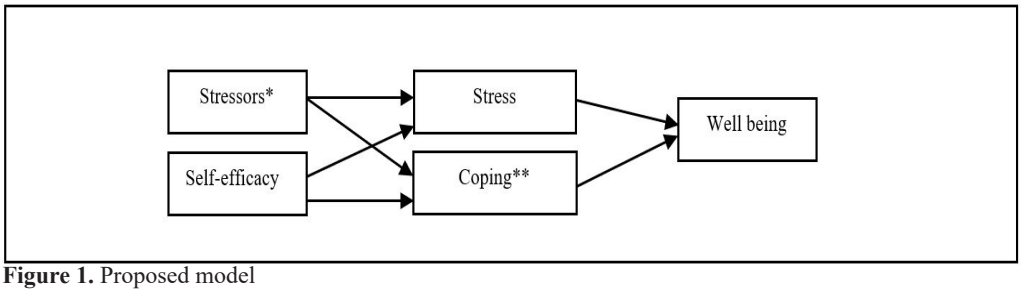

Figure 1. Proposed model

Note: This model is a simplification of the statistical model *two variables were tested to measure stressors, the worry score and the difficulty score **fourteen variables were tested to measure coping.

Source: Prepared by the authors.

To test the model and carry out the mediation analysis, we used the estimators of the regression equations carried out using the Robust Diagonally Weighted Least Squares (DWLS) method. This method is considered a robust technique that uses a polychoric correlation matrix and is suitable for analyzing ordinal data, as it does not require normality of the data and allows for more accurate estimates than other estimators (Distefano & Morgan, 2014). All the mediation tests were carried out using JASP software.

4 ANALYSIS AND DISCUSSION OF RESULTS

4.1 Descriptive analysis

This study's sample consisted of 366 postgraduate accounting students from 28 educational institutions. Of these: 50.27% are male; 26.23% are from 27 and 31 years old; 48.91% declared that they were in a stable union; 62.3% are studying for an academic master's degree; 56.28% are in the process of taking credits; and 63.93% are working concurrently with their master's or doctorate course. Table 1 shows the relative frequency of students' perceptions of the first group of stressors (known as concerns).

Table 1. Stressors: concerns perceived by postgraduates

	0	1	2	3	4
Item	%	%	%	%	%
P1 - Internal pressure to perform well (high personal expectations, etc.).	0.82	1.09	12.02	40.44	45.63
P2 - Interference of study demands on other aspects of your life.	0.82	2.19	20.49	45.08	31.42
P3 - Taking advantage of the subjects on offer.	2.46	9.84	25.68	45.08	16.94
P4 - Low number of contacts with the advisor.	19.67	21.31	31.42	13.93	13.66
P5 - Difficulty with the chosen subject.	3.01	14.21	27.05	31.15	24.59
P6 - External pressure about completion (social, academic, etc.).	5.19	15.57	25.14	26.23	27.87
P7 - Use of supervisions.	7.38	20.49	35.79	25.41	10.93
P8 - Oral presentations.	7.65	18.58	31.69	19.4	22.68
P9 - Possibility of not achieving the performance expected by the board.	1.64	7.92	23.77	29.24	37.43
P10 - Financial issues due to studying part-time or full-time.	17.76	19.95	20.77	18.31	23.22

Table 1. Stressors: concerns perceived by postgraduates

	0	1	2	3	4
Item	%	%	%	%	%
P11 - Time to complete the thesis or dissertation.	4.1	10.93	27.05	29.51	28.42
P12 - Questions relating to the postgraduate calendar and deadlines.	2.73	10.38	29.51	29.24	28.14
P13 - Questions regarding the postgraduate course timetable.	16.39	28.14	30.87	15.57	9.02
P14 - Possible disappointment regarding professional integration.	14.48	21.86	23.5	15.57	24.59
P15 - Possibility of lower grades than expected.	7.10	16.94	29.24	27.87	18.85
Overall score of concerns	Min	Max	Me	Md	SD
	7.00	60	36.97	37.5	9.8

Note: 0 = Not at all worried; 1 = Somewhat worried; 2 = Sometimes worried; 3 = Very worried; 4 = Extremely worried; Min = Minimum; Max = Maximum; Me = Mean; Md = Median; SD = Standard deviation.
Source: Research data.

When comparing these results with those found in the literature, it can be seen that P2 has been a frequent concern in postgraduate studies, already discussed by El-Ghoroury et al. (2012), Cornwall et al. (2018), Evans et al. (2018) and Levecque et al. (2017). Among the least worrying, or least stressful, the following stand out: P4 and P10, a result that diverges from the literature (El-Ghoroury et al., 2012). As for the total score of concerns, the average above half of the scale suggests that these elements do indeed stress students in the postgraduate routine.

The second part of the investigation into stressors, known as difficulties, also shows (Table 2) the relative frequency of responses for each item, as well as the overall score.

Table 2. Stressors: difficulties perceived by postgraduates

	0	1	2	3	4
Item	%	%	%	%	%
D1 - Relationship with other students.	37.16	33.06	24.04	4.92	0.82
D2 - Student-supervisor relationship.	44.54	24.32	22.68	6.01	2.46
D3 - Student-coordination relationship.	42.35	33.33	16.39	5.74	2.19
D4 - Lack of motivation.	12.57	19.67	36.61	18.85	12.30
D5 - Change in the topic initially proposed.	21.59	24.59	24.86	16.12	12.84
D6 - Incompatibility between the desired topic and the one proposed by the supervisor.	35.79	23.77	22.13	10.93	7.38
D7 - Lack of incentive.	18.58	25.14	28.42	14.21	13.66
D8 - Delivery deadlines for coursework.	4.65	8.47	34.43	29.78	22.68
D9 - Timeframe for writing the thesis or dissertation.	6.01	12.30	34.97	25.41	21.31
D10 - Financial aspects of the research.	26.50	26.78	24.32	11.48	10.93
D11 - Personal financial aspects.	14.48	20.22	28.14	17.49	19.67
D12 - Matching studies with personal and family life.	1.37	6.83	19.40	26.23	46.18

Table 2. Stressors: difficulties perceived by postgraduates

	0	1	2	3	4
Item	%	%	%	%	%
D13 - Time to study.	5.19	11.48	28.42	29.51	25.41
D14 - Pressure to publish.	2.73	6.83	21.86	27.87	40.71
Overall score difficulties	Min	Max	Me	Md	SD
	0	51.00	26.98	27.00	9.25

Note: 0 = Not at all difficult; 1 = Somewhat difficult; 2 = Sometimes difficult; 3 = Very difficult; 4 = Extremely difficult; Min = Minimum; Max = Maximum; Me = Mean; Md = Median; SD = Standard deviation.
Source: Research data.

From the items that had the highest frequency of 'extremely difficult' responses, D12 stands out, which is similar to the question about 'making personal life compatible with work', as discussed by El-Ghoroury et al. (2012) and Cornwall et al. (2018). Waight and Giordano (2018) also indicated overwork as an element that affects the well-being of postgraduates. D14, on the other hand, is consistent with perceived productivism in the academic environment, as discussed by Estácio et al. (2019). On the other hand, among the least stressful items is D2, a result that diverges from studies that have shown that the relationship with the supervisor is a factor that contributes to psychological disorders, such as burnout (Martins et al., 2021) and anxiety (Meurer et al., 2021). In relation to the total values, the average is also above half of the scale, which suggests that the items presented as a whole are considered stressful by the research participants.

In a general analysis of the most frequent stressors (concerns/difficulties), we highlight internal pressure, concerns about time and the difficulty of reconciling studies with other aspects. It is understood that this result is convergent with some characteristics of the accounting area, such as the high demand of postgraduate programs due to the short time they have existed (Rezende et al., 2017), in addition to the fact that most students work concurrently with their postgraduate studies.

Table 3 shows the fourteen types of coping strategies measured.

Table 3. Coping strategies used by postgraduates

Strategy dimension	Function*	Min	Max	Me	Md	SD
Active coping	Problem	1.00	8.00	5.36	5.00	1.34
Planning	Problem	0.00	8.00	5.88	6.00	1.47
Instrumental support	Problem	0.00	8.00	4.51	5.00	1.96
Emotional support	Problem	0.00	8.00	4.40	4.00	2.14
Religion	Problem	0.00	8.00	4.58	5.00	2.77
Positive reinterpretation	Problem	0.00	8.00	5.04	5.00	1.93
Self-blame	Emotion	0.00	8.00	5.29	5.00	1.93
Acceptance	Problem	1.00	8.00	4.71	5.00	1.58
Expression of feelings	Emotion	0.00	8.00	4.27	4.00	1.98
Denial	Emotion	0.00	8.00	1.69	1.00	1.76

Table 3. Coping strategies used by postgraduates

Strategy dimension	Function*	Min	Max	Me	Md	SD
Self-distraction	Emotion	0.00	8.00	4.27	4.00	1.90
Behavioral disinvestment	Emotion	0.00	8.00	0.99	0.00	1.45
Substance abuse	Emotion	0.00	8.00	1.21	0.00	1.89
Mood	Problem	0.00	8.00	2.81	3.00	1.89

Note: Min = Minimum; Max = Maximum; Me = Mean; Md = Median; SD = Standard deviation.

*Function: problem-focused strategies are also considered adaptive and emotion-focused strategies are considered maladaptive.

Source: Research data.

Most students use adaptive strategies (planning, active coping and positive reinterpretation) which have the potential to help them deal with stressors so that they don't suffer from their negative effects. However, one maladaptive strategy also stands out, self-blame, which is in line with the internal pressure perceived by the students. Table 4 shows the scores for the self-efficacy, stress and well-being variables.

Table 4. Self-efficacy, stress and well-being of postgraduates

Variable	Minimum	Maximum	Mean	Median	SD
Self-efficacy	14.00	40.00	31.24	31.00	4.75
Stress	0	56.00	31.85	32.00	8.50
Well being	12	48.00	29.29	29.00	7.09

Source: Research data.

The average (31.24) shows that self-efficacy can be considered high. This is evidence of an individual's perception of their own ability (Bandura, 1997) and, when high, helps them to overcome challenging situations (Schwarzer & Hallum, 2008). In addition, the extent to which students feel confident is a positive aspect for them to be able to develop their research activities in postgraduate studies (Jackman & Sisson, 2021).

With regard to stress, it was observed that, on average, the sample scored 31.85 points, which is just over half the scale. When analyzing these scores converted into levels, as suggested by Faro (2013b), this average is considered a high stress level. The majority of the sample (55.46%) had a high stress level, 34.15% had a medium level, 1.64% had a low level and 8.74% had a very high stress level. Overall, the average found was similar to the findings of Rezende et al. (2017), but, overall, the percentage of students with high and very high levels of stress was higher than those found by Rezende et al. (2017) and Faro (2013b). With regard to well-being, the average (29.29) of the respondents is slightly below the central point of the scale, indicating that the students are closer to reduced well-being. In order to understand this value, the lowest score is considered to indicate poorer well-being.

In order to assess the reliability of the constructs measured by the instruments, Cronbach's alpha was calculated, which showed the following values for the scale: i) stressors (worries and difficulties): 0.856 and 0.841; ii) stress: 0.905; iii) coping: 0.805; iv) self-efficacy: 0.882; and v) general health (well-being): 0.876. It should be noted that all scores were higher than the limit of acceptability (0.6), indicating satisfactory consistency, as indicated by Hair et al. (2005).

4.2 Statistical analysis

To present the mediation analysis, Table 5 shows the total effects, which indicate the relationships among

the variables worries, difficulties and self-efficacy and well-being in the absence of any other variable, and the direct effects, which represent these same relationships, but taking into account the inclusion of the mediating variables.

Table 5. Total and direct effects

ETotal Effect (X → Y) – Path C							I.C. 95%	
			Estimate	E. P.	z-value	p-value	Lower	Upper
Concerns	→	Well being	-0.225	0.060	-3.771	< .001*	-0.341	-0.108
Difficulties	→	Well being	-0.214	0.058	-3.696	< .001*	-0.327	-0.100
Self-efficacy	→	Well being	0.391	0.045	8.723	< .001*	0.303	0.479
Direct Effect (X → Y) – Path c’								
Concerns	→	Well being	-0.133	0.054	-2.468	0.014*	-0.239	-0.027
Difficulties	→	Well being	0.013	0.050	0.264	0.792	-0.085	0.112
Self-efficacy	→	Well being	0.127	0.043	2.974	0.003*	0.043	0.211

Note: E.P. = Standard error; I.C. = Confidence interval. The asterisks (*) in the p-value indicate that the relationships were significant at the 5% level.
Source: Research data.

Analysing the total effects shows that stressors are negatively related to well-being and self-efficacy is positively related. When the mediating variables (stress and coping) are added, the relationship between difficulties and well-being loses significance, while worries and self-efficacy are maintained, but with lower estimates. These first indications (c'<c) suggest that there is mediation in the model tested, partial in the analysis of self-efficacy and worries and total in the analysis of difficulties. In other words, the relationship between stressors and self-efficacy and well-being is better understood when we consider that stress and coping mediate this relationship.

The results confirm the findings of qualitative studies (Devos et al., 2016; Hunter & Devine, 2016), which have shown that some stressors harm the well-being of postgraduate students. They also converge with studies by Priesack and Alcock (2015) and Schönfeld et al. (2019), who had identified a direct relationship between self-efficacy and well-being in different audiences, including students.

In addition, this study analyses these relationships with the insertion of mediating variables (Table 6), which are called indirect (mediated) effects, measured from the interaction of the relationships among the independent variables and the mediating variables and these with the dependent variable. Thus, it is possible to see the impact that each independent variable has on well-being depending on the path (ab) analysed, considering the mediation of stress and each coping variable. It should be noted, however, that these results only refer to the variables that contributed significantly in all the relationships analysed.

Table 6. Indirect effects

(X=>M=>Y) - Path ab								I.C. 95%	
					Estim.	E.P.	z-value	p-value	Lower	Upper
Pre.	→	Stress	→	B.E.		0.035	-3.396	< .001*	-0.186	-0.050

Table 6. Indirect effects

(X=>M=>Y) - Path ab									I.C. 95%	
					Estim.	E.P.	z-value	p-value	Lower	Upper
Pre.	→	Positive reinterpretation	→	B.E.	0.026	0.012	2.241	0.025*	0.003	0.049
Dif.	→	Stress	→	B.E.	-0.192	0.036	-5.266	< .001*	-0.263	-0.120
Dif.	→	Positive reinterpretation	→	B.E.	-0.035	0.013	-2.679	0.007*	-0.061	-0.009
Aut.	→	Stress	→	B.E.	0.197	0.031	6.395	< .001*	0.136	0.257
Aut.	→	Positive reinterpretation	→	B.E.	0.067	0.018	3.673	< .001*	0.031	0.103

Note: Estim. = Estimate; E.P. = Standard error; I.C. = Confidence interval; Pre. = Worries; Dif. = Difficulties; Aut. = Self-efficacy; B.E. = Psychological well-being.

The asterisks (*) in the p-value indicate that the relationships were significant at the 5% level.

Source: Research data.

It can be seen that stress significantly mediated the relationship among stressors and well-being, confirming H_1, which was also perceived when self-efficacy was analysed, confirming H_3. As for coping, all fourteen strategies were included in the analysis (see Table 3), but only the positive reinterpretation strategy significantly mediated the relationship between stressors and well-being, which confirmed H_2. The mediation of this strategy was also significant when analysing self-efficacy, confirming H_4. Considering the simultaneous relationships in the model presented, it should be emphasised that the stress is explained by the perception of stressors, and this occurrence reduces students' well-being. In addition to it, the individual's self-efficacy has the potential to reduce the stress level, which would consequently contribute to greater well-being.

Figure 2 shows the detailed constitution of the indirect effects (ab). It should be noted that the coefficient of determination of the mediation model was above 60 per cent ($R^2 = 0.618$), which suggests a high explanatory value for the well-being variable.

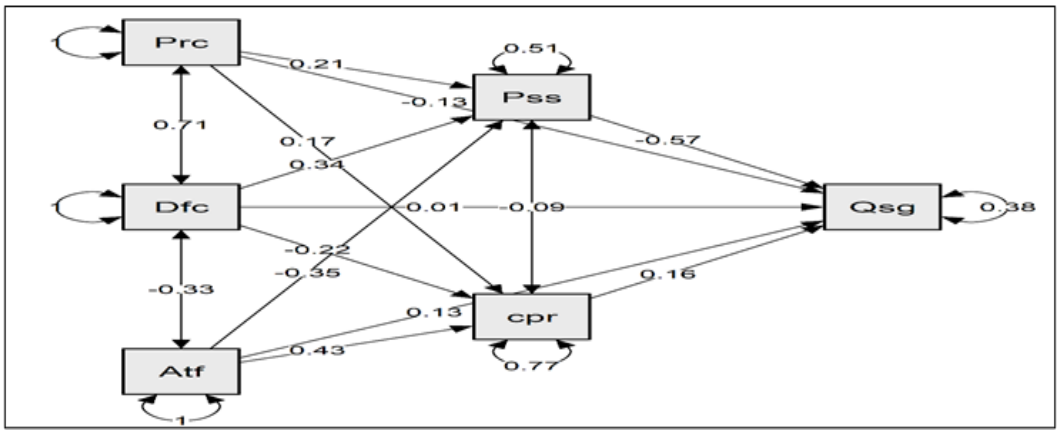

Figure 2. Diagram of indirect effects

Note: Prc = Worries; Dfc = Difficulties; Atf = Self-efficacy; Pss = Stress; cpr = positive reinterpretation; Qsg = Well-being.

Source: Survey data.

It was observed that in the paths to (X=>M), the stressors (worries and difficulties) were directly related to the stress level. This result is similar to that of Faro (2013) and Rezende et al. (2017) and suggests that the high

frequency of stressors present in the postgraduate routine leads to a high stress level among students. Self-efficacy, on the other hand, is indirectly related to stress, which corroborates previous findings (Bodys-Cupak et al., 2016; Saleh et al., 2017). Thus, despite being an inherent characteristic of the individual, it can be better developed and contribute to reducing stress and its possible effects.

It was also noted that the two groups of stressors were related in different ways to coping. Self-efficacy was positively related to the positive reinterpretation strategy, corroborating previous findings (Bodys-Cupak et al., 2016; Crego et al., 2016). Furthermore, when considering Bandura's (1997) theoretical perspective, the high self-efficacy of the participants in this research effectively contributed to the use of adaptive strategies, such as positive reinterpretation, positively affecting well-being.

Analysing the b-paths (M=>Y) shows that stress is negatively related to well-being, in line that greater stress has the potential to negatively impact individuals' psychological condition (Carr & Umberson, 2013; Monroe, 2008). And the strategy of positive reinterpretation contributes positively to well-being, in line with the findings of Faro (2013a) and Freire et al. (2018), who had identified a direct relationship among adaptive strategies (such as positive reinterpretation) and well-being variables. It is worth noting that this strategy refers to the perspective of facing stressful situations positively (Maroco et al., 2014), in order to minimise the stress effects.

The findings obtained in the model presented corroborate the literature (Faro, 2013b; Rezende et al., 2017), confirming that postgraduate students have encountered several stressors in their academic routine, favouring an increase in stress levels. And it goes beyond the results of these studies by analysing self-efficacy and the use of coping, i.e. it addresses variables that are the student's own and that can be improved in order to increase the student's resilience, so that they can face adversity in their career without suffering the stress negative effects. Especially with regard to self-efficacy, the results converge with the study in Accounting area by Coelho and Nascimento (2020), who pointed out how this variable can be developed in order to minimise student’s anxiety.

5 FINAL CONSIDERATIONS

The theoretical contributions of the findings of this study include the joint analysis of the variables, which reinforces the cognitive approach of Lazarus and Folkman (1984), who point out that stressful situations in the environment stimulate stress, but at the same time, individuals can have coping strategies with the potential to influence the impact of this stress. The results also show the self-efficacy potential to predict coping. Thus, the study adds to previous discussions, particularly in Accounting area, by emphasising the need to look simultaneously at the environment aspects and the individual.

Furthermore, the relationships provide thought regarding the consequences of numerous stressors, high stress and reduced well-being in postgraduate studies. Thus, it is pertinent to recall previous studies, which have shown that high stress is associated with lower academic performance (Rezende et al., 2017) and a greater likelihood of dropping out (Pyhältö et al., 2012). Furthermore, if postgraduate studies are constantly perceived as stressful, there will be losses not only for the students who drop out and fail to qualify, but also for the supervisors who were monitoring their projects, as well as for the programme, which will have a higher drop out rate, which will have an impact on its objectives and institutional assessments.

From an empirical point of view, the results contribute by highlighting factors that explain the student’s well-being. Consequently, they point to the importance of postgraduate programmes, particularly in the Accounting area, monitoring the challenges experienced by their students and helping them to overcome them. This monitoring is fundamental, as it is understood that the high well-being of postgraduate students can contribute, albeit indirectly, to improving the assessment and consolidation of programmes. Therefore, identifying these factors provides support for the design of targeted intervention activities aimed at bringing changes in the search for a more harmonious academic environment.

Regarding the proposal of intervention activities, it is worth mentioning the recommendations in the literature on self-care actions (Stillwell et al., 2017), as well as specific training to improve coping skills in order to mitigate the possible damage of stress (Long et al., 2021). Some of these activities require the collaboration of qualified professionals, so they are valid options for students themselves to seek out in appropriate places or for educational institutions to include and offer them in their student support programmes. It is also up to the institutions to offer psychological support to students so that they have the support and conditions to face the adversities of the academic routine.

In addition to the role of the institutions, the collaboration of the postgraduate programme coordinators is fundamental. It is understood they can publicise and encourage student’s participation in the possible activities

offered by the institutions. It is therefore suggested that the course coordinators organise regular events with specialised professionals to disseminate the importance of self-care, maintaining mental health and well-being in academic life. To this end, it is important to consider organising the activities during class times or even using them as complementary workload. This is because previous studies (El-Ghoury et al., 2012) have shown that, due to the several demands of postgraduate studies, lack of time is a limiting factor for students to take more care of themselves.

More specifically, it is suggested that professors, especially supervisors, encourage postgraduate students to seek out aid programmes promoted in the academic environment or even outside of it. However, it is worth considering that some of these demands may go beyond the professor's professional training, which is why it would be relevant for educational institutions to also invest in training their teaching staff, as proposed by Waight and Giordano (2018), so that they are at least able to suggest ways to help students. Likewise, institutions should have support programmes for professors, who also deal with stressors in their professional work, as shown in the study by Nascimento et al. (2021).

To summarise, both institutional and professor support are fundamental to reducing existing stigmas about mental health, which possibly keep students away from self-care and prevention activities. Then, it is essential that the students are aware of the postgraduate study challenges and, above all, that they understand that, although these challenges are potentially stressful, they can be less affected if they use coping strategies, as well as being receptive to activities that help them deal with the adversities present in the master's and/or doctorate programme.

About all the results presented here, it is worth highlighting the collection period, which was a unique and atypical time due to the Covid-19 pandemic, which caused concerns, uncertainties and several changes in the population's routine, such as social isolation and the use in online classes. Most of these changes may have been perceived negatively, but in some cases positively, for example, the fact of studying remotely from home may have been considered beneficial for some students. Thus, although the stress levels found were similar to those of previous studies, including those in the Accounting area, it is understood that during this period the students may have felt affected by some stressors, may have modified the use of some coping strategies, since they were isolated, and may have had their self-efficacy and well-being altered. Another limiting issue is that all the instruments are self-report, so they exclusively assessed the students' perception of the investigated variables. It is therefore suggested that future studies be carried out in post-pandemic times and that they use other instruments or analysis techniques that make it possible to broaden the explanation of postgraduate students' well-being.

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APPENDIX

Stressors in graduate school - Worry scale*

The following questions refer to concerns related to postgraduate studies. Indicate how you feel, and assign a value on a scale of 0 to 4, where:

0 - Nothing to worry about	1 - Little concerned	2 - Sometimes worried	3 - Very worried	4 - Extremely worried

1. Internal pressure to perform well (high personal expectations, etc.).
2. Interference of study demands on other aspects of your life.
3. Taking advantage of the subjects offered.
4. Low number of contacts with the advisor.

5. Difficulty of the chosen subject.
6. External pressure regarding completion (social, academic, etc.).
7. Use of supervisions.
8. Oral presentations.
9. Possibility of not achieving the performance expected by the exam board.
10. Financial issues due to part-time or full-time study.
11. Time to complete the thesis or dissertation.
12. Issues relating to the postgraduate calendar and deadlines.
13. Issues relating to the timetable of postgraduate classes.
14. Possible disappointment regarding professional integration.
15. Possibility of lower grades than expected.

Stressors in graduate school - Difficulties scale*

The following questions refer to difficulties related to postgraduate studies. Please indicate how you feel about this, assign a value on a scale of 0 to 4, where:

0 - Nothing difficult	1 - Little difficult	2 - Sometimes difficult	3 - Very difficult	4 - Extremely difficult

1. Relationship with other students.
2. Student-supervisor relationship.
3. Student-coordination relationship.
4. Lack of motivation.
5. Change in the topic initially proposed.
6. Incompatibility between the desired topic and the one proposed by the supervisor.
7. Lack of encouragement.
8. Deadlines for submitting course work.
9. Deadline for preparing the thesis or dissertation.
10. Financial aspects of research.
11. Personal financial aspects.
12. Making studies compatible with personal and family life.
13. Time to study.
14. Pressure to publish.

*These scales are originally in Portuguese and were translated only for the publication of this article.

Identifying Stress - Perceived stress scale

The questions on this scale are about your feelings and thoughts over the last month. In each case, you will be asked to indicate how often you have felt a certain way. Mark from 0 to 4:

0 - Never	1 - Almost never	2 - Sometimes	3 - Almost always	4 - Always

Last month how often did you...

1. Feel sad because of something that happened unexpectedly?
2. Feel unable to control important things in your life?
3. Feel nervous and stressed?
4. Successfully deal with difficult problems in life?
5. Feel that you are coping well with the important changes that are taking place in your life?
6. Feel confident in your ability to solve personal problems?

7. Feel that things are happening according to your wishes?
8. Feel that you couldn't cope with all the things you had to do?
9. Manage to control the irritations in your life?
10. Feel that things are under your control?
11. Get irritated because things that happen are out of your control?
12. Find yourself thinking about the things you have to do?
13. Feel able to control the way you spend your time?
14. Feel that difficulties are piling up to the point where you believe you can't overcome them?

Coping - Brief cope scale

The aim here is to identify ways you have used to deal with difficult (stressful) situations related to postgraduate study. We emphasize that some items are similar, but you should analyze each one separately and assign a value from 0 to 4, where:

0 - Never done this	1 - I've already done this	2 - I do this sometimes	3 - I usually do this	4 - I always do this

I focus my efforts on doing something to cope with the situation.
I take action to try to improve my situation.
I try to find a strategy that will help me with what I have to do.
I think a lot about the best way to deal with the situation.
I ask other people for advice and help to better cope with the situation.
I ask for advice and help from people who have been through the same thing.
I seek emotional support from someone.
I seek comfort and understanding from someone.
I try to find comfort in my religion or spiritual belief.
I pray or meditate.
I try to look at the situation differently in order to make it more positive.
I look for something positive in everything that is happening.
I criticize myself.
I blame myself for what is happening.
I try to accept things as they are.
I try to learn to live with the situation.
I get upset and express my feelings.
I feel and express my feelings of annoyance.
I have said to myself: "this isn't true".
I refuse to believe that this is happening to me in this way.
I focus on other activities to be distant of the situation.
I do other things to think less about the situation, such as going to the movies, watching TV, reading, dreaming, or shopping.
I give up trying to get what I want.
I simply give up trying to achieve my goal.
I take refuge in alcohol or other drugs (pills, etc.) to feel better.
I use alcohol or other drugs (pills) to help me get through problems.
I face the situation by making fun of it.
I face the situation with a sense of humor.

Self-efficacy - General perceived self-efficacy scale

Below are some assertions, assign a value to each of them considering what best represents you, consider the following scale:

0 - It's not true about me	1 - It's hardly true about me	2 - It's moderately true about me	3 - It's totally true about me

1. I can solve most problems if I make the necessary effort.
2. Even if someone objects, I find ways and means of achieving what I want.
3. I find it easy to persist in my intentions and achieve my goals.
4. I have the confidence to do well in unexpected situations.
5. because of my abilities, I know how to deal with unforeseen situations.
6. I can always solve difficult problems when I try hard enough.
7. I remain calm even when facing difficulties because I trust in my ability to solve problems.
8. When I face a problem, I can usually find several solutions.
9. If I'm in trouble, I usually find a way out.
10. No matter what the adversity, I can usually cope with it.

Well-being - General health questionnaire

In the following questions, we want to know how you've been feeling recently assign a value according to the following scale:

1 - Absolutely not	2 - Almost never	3 - More than usual	4 - Much more than usual

Lately:

1. Have you often lost sleep because of your worries?
2. Have you lost confidence in yourself?
3. Have you thought you were useless?
4. Have you had the feeling that you can't overcome your difficulties?
5. Have you constantly felt exhausted and under pressure?
6. Have you felt unhappy and depressed?
7. Have you felt capable of making decisions?
8. Have you felt that you are playing a useful role in life?
9. Have you been able to cope adequately with your problems?
10. Have you been happy with your normal day-to-day activities?
11. Have you been able to concentrate well on what you do?
12. Do you feel reasonably happy, all things considered?

Characterization of respondents

Are you studying

( ) Academic Master's ( ) Academic Doctorate ( ) Post-Doctorate

( ) Professional Master's ( ) Professional Doctorate

Phase you are studying

( ) Studying credits

( ) Credits completed and preparing research (dissertation/thesis)

( ) Completing research (dissertation/thesis)

( ) In doctoral stay

( ) Waiting to defend

( ) Already defended and making final adjustments

Institution where you are studying _____

What is your gender?

( ) Female ( ) Male ( ) Prefer not to answer

Age in years _____

Marital status

( ) Single ( ) Married ( ) Divorced ( ) Widowed

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