

# Self-handicapping and academic path of undergraduate Business students

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## ABSTRACT

This study examined the effect of using self-handicapping strategies on the academic path of undergraduate Business students. Previous studies have analyzed the effects of self-handicapping behavior on academic performance, thus not reflecting on a broader scope such as academic path. Therefore, analyzing the effect of self-handicapping on the academic path, based on a construct that represents academic life, makes it possible to highlight its impacts on major elements that, together, comprise the building of the students' path, such as: university setting, commitment to the course, student skills, involvement in course activities, study conditions, and academic achievement. Self-handicapping is associated with high levels of stress, depression, anxiety, and procrastination. So, assessing the effects of self-handicapping on the education of prospective organizational managers is especially important, as the consequences of continued use of self-handicapping strategies may go beyond the academic setting and affect social and affective issues of these people. Motivated by their views, beliefs, and stereotypes, which lead them to self-handicapping behavior, business leaders and managers can take actions that generate losses and frustrations in situations that require an assertive position in decisions taken in the organizational setting. This prevents the achievement of optimal solutions, which may result in economic bankruptcy and non-compliance with organizational goals and results. In this way, grasping the effect of self-handicapping on the academic path of students in the Business area creates conditions to mitigate it during their education, preventing the results of its continued use from going beyond the university setting and also causing losses in the corporate setting. A survey was carried out with students enrolled in six undergraduate courses in the Business area of a federal public university in southern Brazil. The sample had the participation of 212 undergraduate students and data analysis took place by using structural equation modeling (SEM). The results point out a moderate presence of self-handicapping behavior in research participants and confirm the hypothesis that self-handicapping negatively affects the academic path of undergraduate Business students. This effect tends to be greater among students over 25 years of age and among male students. Even with a moderate presence of self-handicapping behavior among the students under analysis, its effect on the academic path was negative and significant, which suggests that in samples with rather self-handicapping individuals, the academic path tends to be even more impacted.

**Keywords:** self-handicapping, academic path, Higher Education, academic performance, academic motivation.

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## 1. INTRODUCTION

Self-handicapping is a strategy often used by students to regulate threats to self-esteem caused by fear of failing in academic life (Vargas, 2018). This term is acknowledged in the international literature (Martin et al., 2001; Török et al., 2018) and the US psychologists Berglas and Jones (1978) are considered pioneers in this literature. The term *self-handicapping* was originally defined by Berglas and Jones (1978) as any performance adjustment action or choice that increases the opportunity to externalize (or excuse) failure and internalize success, being operationalized through impediments created with the purpose of justifying their own failure (Zanatto, 2007).

The literature points out some clues of self-handicapping in the school setting. Students with tendencies towards self-handicapping behaviors have their academic results negatively affected, as self-handicapping is associated with low self-regulation of learning, persistence in staying in the course, future academic plans, and academic performance (Martin et al., 2001). Students who are not self-regulated are more likely to self-handicapping, as they are unable to devote themselves to their studies and, sometimes, end up not having the persistence to complete the course (Cano et al., 2018).

Self-handicapping is also associated with stress (Sahranç, 2011), depression (Sahranç, 2011), anxiety (Sahranç, 2011; Yildirim & Demir, 2020), procrastination (Yildirim & Demir, 2020), self-esteem (Yildirim & Demir, 2020), and self-compassion (Yildirim & Demir, 2020). Even perfectionist students can resort to self-handicapping, as they often experience the fear of not doing something well, of not being satisfied with their accomplishments, of feeling guilty, ashamed, and a low sense of self-respect (Akar et al., 2018). On the one hand, studies point out that self-handicapping can bring short-term benefits, such as reducing efforts and procrastination, which can momentarily alleviate anxiety in performing tasks (Cano et al., 2018). However, its long-term use may entail costs in the students' academic life, which can become a vicious cycle (Urdañ & Midgley, 2001; Yildirim & Demir, 2020).

Seeing how students experience the university setting and make choices that reflect on academic life is a challenge, given the characteristics of students, the institutional setting and its changes, which should not be thought of in isolation, but in an interconnected way (Vendramini et al., 2004). In this sense, academic life reveals itself as a multifaceted process, consisting of various dimensions, such as: previous academic education, relationships, involvement with university activities, choice of course, academic performance, study skills, study conditions,

external conditions, physical and psychological health status, and university setting (Vendramini et al., 2004).

In view of the above, it is possible that self-handicapping proves to be an obstacle to achieving a successful academic path, given its various negative implications in academic life (Martin et al., 2001), in the students' health and psychological well-being (Akar et al., 2018; Cano et al., 2018; Sahranç, 2011; Yildirim & Demir, 2020). For these reasons, this research sees that self-handicapping is related not only to poor performance, but also produces negative effects on the students' academic path, reflected by the various dimensions that represent academic life.

The success of student follow-up programs built to minimize the use of self-handicapping strategies was reported by Kearns et al. (2008) who investigated their effects on graduate students. In this sense, the building of research that expands the scope of analysis of self-handicapping in undergraduate education is important for appropriate follow-up of students and its prevention (Ganda & Boruchovitch, 2015; Mena, 2019; Schwinger et al., 2014; Vargas, 2018; Verdinelli et al., 2016), especially since self-handicapping directly affects learning quality (Elliot & Church, 2003).

A considerable portion of Brazilian research involving the theme of self-handicapping is focused on students in the teaching area, who will become professors (Ganda & Boruchovitch, 2015, 2016). In the Business area, Verdinelli et al. (2016) related the students' cognitive styles in the last year of the Accounting Sciences course with self-boycott and academic self-efficacy and they identified how such behaviors are linked to the students' academic performance. However, Verdinelli et al. (2016) do not address the students' academic life, from the perspective of their path built during the undergraduate studies, limiting themselves to assessing the relationship between cognitive styles and academic performance. Therefore, less is known about the effect of self-handicapping on the academic path, assessed by a specific instrument that considers the various aspects that constitute it.

In view of the exposed gaps, this research aimed to analyze the effect of using the cognitive self-handicapping strategy on the academic path of undergraduate students in the Business area. To do this, information was collected from students of Business Administration, Accounting Sciences, Economics, Foreign Trade, and Technology in Cooperative Management courses at a federal public university located in southern Brazil.

Courses in the Business area are responsible for educating organizational leaders, thus it is especially

important to investigate the effects of self-handicapping during the education of prospective managers, as the consequences of continued use of self-handicapping strategies can extrapolate the academic setting, affecting social and economic issues (Martin et al., 2003).

The support of stereotypes, convictions, and views make the continued practice of self-handicapping inevitable. Indeed, in organizational settings, managers can take actions that generate losses and frustrations in situations that require an assertive positioning in decision-making, but their views, beliefs, and stereotypes prevent achieving the optimal solution. As a result, self-handicapping can lead to economic bankruptcy and

non-compliance with organizational goals and results (Meneghetti, 2008).

It is hoped that the results of this research broaden the discussions on how self-handicapping may be perceived in the academic setting and its effects on the students' path, so that educational institutions and professors are attentive and plan preventive actions, guiding and accompanying students in the building of behaviors more conducive to effective learning (Ganda & Boruchovitch, 2015; 2016; Török et al., 2018; Vargas, 2018). So, raising awareness and rescuing students from self-handicapping behaviors can be ways of changing attitudes and behaviors of prospective professionals in the Business area.

## 2. LITERATURE REVIEW AND HYPOTHESIS

### 2.1 Self-Handicapping

Meurer and Costa (2020) point out that discretionary student behaviors may be associated with psychological variables and the *impostor phenomenon* is one of the psychological traits and characteristics that have been linked to this type of behavior. The impostor phenomenon corresponds to feelings manifested by people who doubt their capabilities and underestimate them. People with these traits tend to attribute their success to luck, chance, or factors outside their own competence. To justify their failures and avoid judgment, students with higher levels of the impostor phenomenon can shape their academic behavior by taking self-handicapping attitudes (Meurer & Costa, 2020).

Student behavioral characteristics in the context of academic life may be explained by assumptions of theories of academic motivation (Seifert, 2004). Studies involving self-handicapping behavior are associated with some theories, among them the Self-Value Theory (Beery, 1975; Covington & Beery, 1976; Covington, 1984).

The Self-Value Theory proposes that the person is motivated to maintain and protect a sense of self-worth. Its approach emphasizes internal and external perception as a key factor influencing behavioral success (Covington, 1984). Thus, the possibility that the individual is perceived as incompetent can threaten her/his self-worth and, as a defense mechanism for her/his self-esteem, she/he tends to avoid situations that test her/his ability. Therefore, failure may not necessarily be linked to lack of motivation, but to an excessive sense of self-worth protection to avoid failure.

In the academic context, self-worth is directly linked to performance, i.e. the individual sense of worth is linked to a person's ability to succeed in academic activities. For this reason, in situations of performing tasks and activities, the possibility of failure becomes a threat (Covington, 1984) and, as a mechanism to protect their self-worth, people can take self-handicapping attitudes.

Some students feel anxious, insecure, doubt their ability to carry out academic activities, fear failure and, as a result, tend to show escape behaviors or use excuses when performing tasks (Berglas & Jones, 1978; Cano et al., 2018; Ganda & Boruchovitch, 2015, 2016; Zanatto, 2007). This occurs because individuals do not assess their emotional and cognitive characteristics to carry out activities, which leads them to build a motivational process to protect their self-esteem and, hence, end up resorting to self-handicapping strategies (Mena, 2019).

Self-handicapping is a cognitive strategy of building attitudes that create impediments to reduce the probability of success in carrying out an activity (Berglas & Jones, 1978). This makes it possible to explain possible failure in their performance and in case of success, without efforts, their skills stand out to others (Seifert, 2004). These situations favor the person to maintain her/his self-worth (Covington, 1984, 1992). In case of failure, the person has the possibility to justify her/his failure, not putting her/his personal capacity in doubt, but attributing her/his poor performance to external factors, aiming to preserve her/his self-esteem (Berglas & Jones, 1978) and her/his self-worth (Covington, 1984, 1992).

The first study by S. Berglas and E. E. Jones, conducted in the 1970s, addressed university students in the course “Introduction to Psychology,” who had to choose between taking two drugs, one of which would hinder their performance and the other would improve it. The results showed that some students preferred the drug that would hinder their performance. Thus, when taking the drug that impaired their performance, students could attribute their failure to drug use instead of attributing it to their incompetence. In this sense, the authors concluded that some people who anticipate a possible failure purposefully create situations to which they can attribute the blame for their failure and not for their lack of competence (Mena, 2019).

One of the most cited examples of self-handicapping is the student leaving the night before an important assessment. Instead of studying, the student goes to a party the night before an exam. If she/he performs poorly, she/he can attribute her/his failure to lack of study rather than lack of skill or intelligence. On the other hand, if she/he does well on the test, she/he may conclude that she/he has exceptional ability, as she/he managed to do well without studying (Berglas & Jones, 1978). According to Yildirim and Demir (2020), academic procrastination is considered one of the most usual forms of self-handicapping.

However, even if procrastination is seen as an example of self-handicapping, the literature defines self-handicapping as something broader, since it includes the creation or claiming of several other barriers, such as making choices that weaken academic performance (Yildirim & Demir, 2020). Furthermore, not every form of procrastination is harmful to individuals, requiring anticipatory self-protection reasons for the person's behavior to be considered self-handicapping (Martin et al., 2003).

Vargas et al (2018) validated a Self-harm Strategies Scale (SSA), in which they identified two factors that reflect self-handicapping and that are associated with academic performance: time management issues and proper preparation of academic activities (Factor 1) and issues related to attention control and concentration (Factor 2). The first factor includes issues involving, for instance, the management of study time and preparation for carrying out activities; procrastination in performing tasks and even non-compliance with deadlines; and absence of an organized study routine. The second factor includes aspects related, for instance, to distractions during classes through conversation or the use of telephones, absence from classes, or dropping out of classes during the course or in prioritizing leisure activities when there are major tasks to be performed.

The examples mentioned above are self-handicapping attitudes insofar as they are taken with the purpose of justifying, for oneself and for others, the achievement of unsatisfactory results, so they serve as self-worth defense mechanisms and management of impressions about the user. Urdan and Midgley (2001) consider that self-handicapping behavior is more usual in an academic context, because in this setting people are continually faced with tasks and situations in which their skills are exposed to the public domain.

In this way, self-handicapping behavior may affect students' academic performance, learning ability, persistence, health, and psychological well-being, bringing implications to their academic path.

## 2.2 Academic Path

Entering Higher Education represents the beginning of a new stage in students' lives, and this is usually accompanied by new responsibilities, which require students to change their habits, sometimes giving rise to emotional conflicts. Students face numerous challenges during the early months of undergraduate studies, such as the building of a new social network, the need for greater autonomy in carrying out activities in comparison to High School, in addition to dealing with the ‘temptations’ of the university setting, such as alcohol, drugs, and sex (Mattanah et al., 2010).

Soares et al. (2016) see that it is in Higher Education that the student's global development takes place, because this setting gives rise to competences, emotion control, building of autonomy, interpersonal relationships, identity, personal projects, ideals, and integrity. That said, according to the authors, the Higher Education setting goes beyond the expectation of conveying knowledge and providing students with intellectual skills. Each student experiences her/his academic career in a different way. In the interval between a student's entry to Higher Education and her/his exit, achieved with graduation, there are many events and a long way to go (Polydoro, 2000), which lead to success or failure in academic life, depending on her/his choices and attitudes.

Thus, the academic path can be marked by promising experiences, rewarding commitment and dedicated efforts. On the other hand, it may be marked by disappointments, frustrations, and dissatisfaction, hindering her/his chances of success. Often, this occurs due to wrong choices or psychological aspects, not always perceived. Some difficulties faced range from incompatibility with the chosen course to unsatisfactory academic performance, which lead to failure or even dropout (Mognon &

Santos, 2014). Other difficulties are related to cognitive, motivational, and psychological factors, such as low self-esteem and a sense of self-worth, which may be accompanied by self-handicapping behavior (Berglas & Jones, 1978).

Vendramini et al. (2004) think it is challenging to grasp the dimensions that reflect how students experience the university setting and make their choices in academic life, since one cannot think in isolation of the students'

characteristics or the institutional setting, but of the interconnection between both, as well as the changes produced, i.e. it is a multifaceted process.

Thus, Vendramini et al. (2004) investigated students' self-perception of academic life, with the purpose of grasping the characteristics of academic life. Through the research, Vendramini et al. (2004) built and validated the Academic Life Assessment Scale (ALAS), with five dimensions of academic life, described in Table 1.

**Table 1**

*Description of the ALAS factors*

Factor	Description
1 – University setting	Specific, organized context with characteristics of its own to which the student's action is connected, highlighting the role of this setting, as well as its physical, social, and organizational characteristics.
2 – Commitment to the course	Refers to the student's degree of certainty regarding the choice made and the perception of security in terms of the professional training provided by the course.
3 – Student skill	Refers to the person's educational potential, considering their basic skills, previous education, and personal conditions.
4 – Involvement in non-mandatory activities	It concerns student engagement in experiences that are not formal requirements of the course, but which are promoted or encouraged by the university.
5 – Study conditions and academic performance	It has to do with the involvement theory, in which student growth and learning are explained by the investment of physical and psychological energy and by the time spent with academic needs.

**Source:** Adapted from Vendramini et al. (2004).

Having the study by Vendramini et al. (2004) as a basis, the ALAS has been applied to various populations and associated with other variables in student life. Santos et al. (2011) sought the relationship between academic life and motivation to learn in university students and analyzed differences due to sex, age, and course. The authors found some associations such as, for instance, women are more committed to the course, have better study conditions, and have better academic performance when compared to men, however, they are motivated by the possibility of showing their abilities and skills. Despite the associations found between the ALAS factors and the goals of the Learning Motivation Scale (LMS), the correlations between scales were low, which according to the authors may mean that other factors can better explain academic life.

Soares et al. (2016) analyzed the relationship between academic life and social skills. The study proved that there is no relationship between these dimensions. On the other hand, Mognon and Santos (2014) found a positive and significant relationship between academic life, measured by the ALAS, and vocational exploration, measured by the Vocational Exploration Scale (VES). Mognon and Santos (2014) emphasize that knowing characteristics of the university context, as well as everything that surrounds

the student, is key for assessing academic life. They also highlight the importance of the role of Higher Education institutions in the students' academic adaptation.

In this sense, grasping the academic path, in this study, encompasses the academic experience and experiences generated during the student's undergraduate studies, which denote their academic life. For instance, it considers how the student's involvement in curricular and extracurricular activities is, what the personality characteristics are, how her/his involvement in the academic setting takes place, and her/his social interaction. So, the student interaction process with regard to the institutional teaching environment and changes that stem from this interaction are assessed.

### 2.3 Research Hypothesis

Generally, entering Higher Education means a dream coming true, and this unfolds positively or negatively according to academic experiences (Vendramini et al., 2004). The way a student experiences the university setting during undergraduate studies and the way she/he faces the challenges that arise in Higher Education may lead her/him to resort to self-protection strategies, since the environment, the high levels of stress and anxiety make an

university student vulnerable to maladjustment, leading her/him to look for ways to protect her/his self-worth (Berglas & Jones, 1978; Polydoro, 2000; Sahrañç, 2011; Vendramini et al., 2004). According to Covington (1984), in the academic context, self-worth is directly linked to performance, i.e. a person's value lies on her/his ability to do something well, so in situations of achievement, the possibility of failure becomes a threat.

When a person feels overwhelmed by the expectations of their performance, she/he sometimes resorts to self-handicapping behavior, and this is often the time when even talented students manifest it as a defense mechanism (Snyder et al., 2014). Being afraid of failure, something evidenced by poor performance, they avoid challenging situations, in an effort not to threaten their perception of self-worth (Snyder et al., 2014).

Thus, research has been carried out to identify factors that reflect on self-worth and the use of self-handicapping strategies. In the educational context, self-handicapping is associated with motivation (Mena, 2019; Vargas, 2018; Zanatto, 2007), self-esteem and self-efficacy (Mena, 2019), self-regulation (Cano et al., 2018; Ganda & Boruchovitch, 2015, 2016; Martin et al., 2001), academic achievement (Akar et al., 2018), anxiety (Cano et al., 2018; Sahrañç, 2011), stress, depression, fear of failure (Sahrañç, 2011; Schraw et al., 2007), perfectionism (Akar et al., 2018; Martin et al., 2001), persistence (Martin et al., 2001),

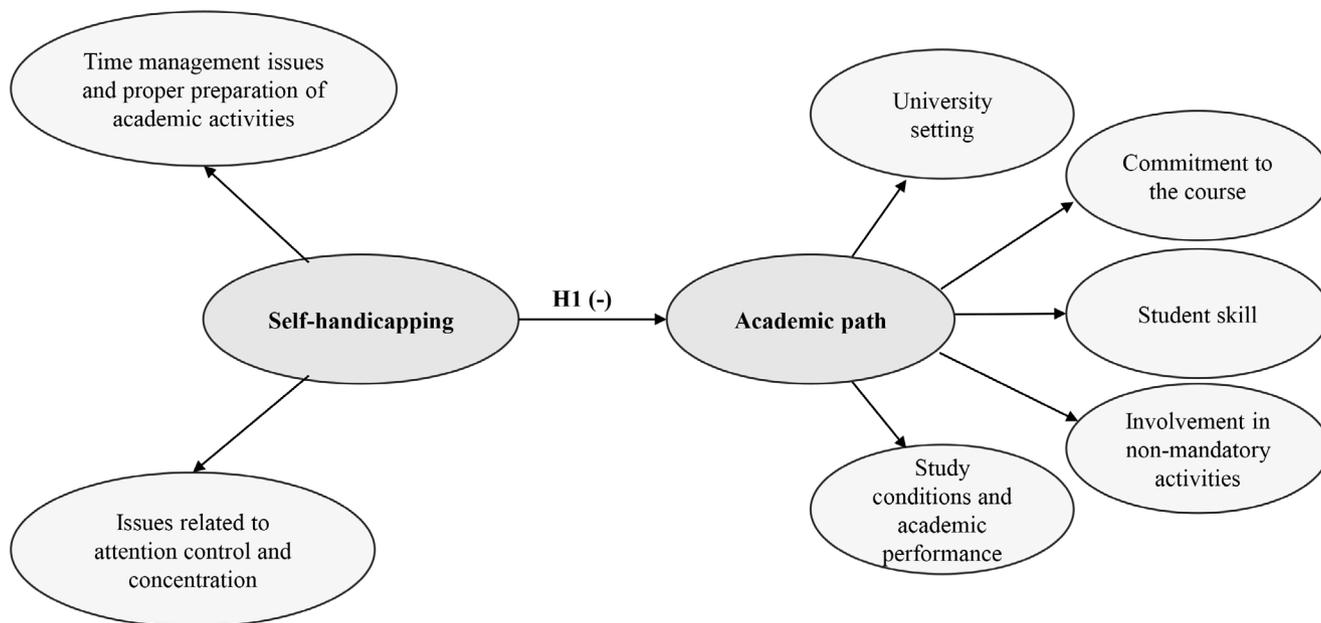
and academic performance (Akar et al., 2018; Martin et al., 2001; Mena, 2019; Vargas et al., 2018; Zanatto, 2007).

In the accounting area, Verdinelli et al. (2016) analyzed the relationships between the cognitive styles of Accounting Sciences students enrolled in the Entrepreneurship subject, with their self-boycott and academic self-efficacy behaviors. Furthermore, they identified how these behaviors are linked to school performance. The authors found that students' cognitive styles influence academic performance, as they enhance their results and that self-boycott and academic self-efficacy behaviors have a negative relationship with academic performance (Verdinelli et al., 2016).

As observed, several aspects of academic life influence student behavior, and they may incur self-handicapping attitudes as a defense mechanism of their self-worth. Thus, based on the Self-Value Theory and in view of the empirical results that point out the effects of using self-handicapping strategies in the academic setting, it is assumed as a research hypothesis:

**H1:** The use of self-handicapping strategies negatively affects the academic path of undergraduate students.

After the theoretical discussion and the building of the research hypothesis, Figure 1 illustratively demonstrates the hypothesis and the relationships to be tested between the study constructs.



**Figure 1** Theoretical research model

Source: Prepared by the authors.

Faced with the effects of self-handicapping behavior in the academic setting, as pointed out in previous research, the hypothetical formulation of this study opens room for discussion about the effects of self-handicapping behavior on the academic path of undergraduates in the

Business area. Thus, students, teaching institutions, and professors are able to think through this topic and discuss alternatives to reduce self-handicapping attitudes in favor of building a successful academic path.

### 3. METHODOLOGICAL PROCEDURES

The research is classified as descriptive, with a quantitative approach, being operationalized through a survey. The research universe comprises undergraduate students enrolled in the academic cycle 1/2021, entering until the year 2020 of the 6 face-to-face courses in the Business area of the university under analysis. The choice of university and courses in the Business area was based on the representativeness of vacancies and courses offered in the region where the institution is headquartered and on its campuses. The Business area of the university under analysis consists of Business Administration courses (with a course on the headquarters campus and another course on the campus outside the headquarters), Accounting Sciences, Economic Sciences, Foreign Trade, and Technology in Cooperative Management.

The research was conducted within a pandemic period, therefore, participants are linked to two different realities, in which part of the students had previous experience of face-to-face academic path and part of the students had only academic experiences restricted to the remote teaching modality, so far of carrying out the research. In this sense, the academic cycles 1/2020, 2/2020, and 1/2021 were restricted to the remote teaching modality, used by the university within the pandemic period. Thus, the study-base population consisted of 1,219 students enrolled in the academic cycle 1/2021, disregarding, in this case, those entering the year 2021. The final sample consisted of 212 valid responses from students to the research instrument.

Data collection was carried out through an online questionnaire instrumented and published on the *Google Forms* platform, and the link was sent by email to students enrolled in courses in the Business area, arranged in a non-public dataset. Data were collected between August and September 2021. This instrument complies with the procedures related to the higher education institution's ethics committee under the Certificate of Submission for Ethics Appreciation (Certificado de Apresentação para Apreciação Ética [CAAE]) No. 47682521.9.0000.5324 and consists of 56 questions divided into 3 parts (50 for the research items of the constructs and 6 on the sample profile).

The first part, consisting of 6 questions, open- and close-ended, with the intent of identifying the sample profile, such as: course, year of admission, semester, age, gender, and receipt of financial aid to attend Higher Education.

The second part consists of 16 close-ended questions to identify self-handicapping behavior (second-order), based on the scale proposed by Vargas (2018) and Vargas et al. (2018), validated in Portuguese Higher Education. The SSA has its items grouped into two first-order constructs: time management issues and proper preparation of academic activities (AS\_A) and issues related to attention control and concentration (AS\_B); and it is measured using a Likert-type scale with response options distributed in 4 points, ranging from 1 (It has nothing to do with me) to 4 (It describes me really well).

The third part of the instrument consists of 34 close-ended questions, related to the academic path (second-order), based on the scale proposed by Vendramini et al. (2004), validated in Brazilian Higher Education. The ALAS has its items divided into five first-order constructs: university setting (TA\_A); commitment to the course (TA\_B); student skill (TA\_C); involvement in non-mandatory activities (TA\_D); and study conditions and academic performance (TA\_E); and it is measured using a 5-point Likert-type scale (1 – strongly disagree to 5 – strongly agree).

A pre-test of the instrument was carried out before using it for definitive data collection, in order to enable the detection of inconsistencies and alteration of statements in the questionnaires that were not intelligible for the final version. The pre-test of the instrument, structured on the *Google Forms* platform, was made available to the 80 students in the eighth semester of the courses under analysis, enrolled in the academic cycle 2/2020. This semester, due to the Coronavirus pandemic, took place between February and May 2021. Eighteen participations were obtained and the scales showed favorable internal consistency (0.943 for self-handicapping and 0.859 for academic path) and, hence, suitable for use in research (Fávero & Belfiore, 2017). Small occasional adjustments

were made according to the respondents' comments and suggestions. This procedure is usual to further adapt the questionnaire to the reality under analysis (Bellora-Bienengräber et al., 2022).

Data were analyzed using the SEM technique with estimation by partial least squares (PLS), in the software *SmartPLS 3.0*. This technique becomes interesting for several reasons, among them the possibility of modeling second-order variables and their applicability to studies within the Business area (Hair et al., 2017, 2019). Specifically for the study's second-order constructs, the repeated indicators approach was applied through a Type I structure – Reflective-Reflective (Sarstedt et al., 2019). However, it is worth assessing whether sample size is compatible with the technique at stake. For this purpose, the software *G\*Power 3.1.9.7* has been used, based on the

following parameters: (i) effect size of 0.15 (medium); (ii)  $\alpha$  err prob of 0.05; (iii) power ( $1 - \beta$  err prob) of 0.95; and (iv) 1 predictor in the dependent variable. Based on these procedures as recommended by Hair et al. (2017), the minimum sample size is 89 respondents, i.e. the sample obtained (212) is satisfactory for applying the PLS.

In an additional analysis, two variables segregated into subgroups were considered, related to the student profile: gender (male and female) and age (up to 25 years old and over 25 years old) (Ganda & Boruchovitch, 2015, 2016; Mena, 2019; Vargas, 2018). This division of subgroups by age was based on the median, in order to grasp the dynamics of phenomena under analysis between the subgroups with the highest and lowest age in the sample. This procedure is usual in the literature (Horz et al. 2022; Lunkes et al. 2020).

## 4. PRESENTATION OF RESULTS

### 4.1 Characterization of Respondents

Among the 212 research participants, 38% are students in the Business Administration course (headquarters campus and outside the headquarters), 33% in the Economics course, 21% in the Accounting Sciences course, 7% in Foreign Trade, and 1% in Technology in Cooperative Management; 54% of respondents identify themselves as female and 53% belong to the age group of up to 25 years. Most respondents did not receive any type of scholarship or financial aid to complete their undergraduate degree (67%). Respondents entered the university in the years 2014 (4%), 2015 (4%), 2016 (6%), 2017 (18%), 2018 (20%), 2019 (25%), and 2020 (23%).

### 4.2 Self-Handicapping

The instrument used to assess self-handicapping consists of the response alternatives: 1 (It has nothing to do with me); 2 (It has little to do with me); 3 (It has to do with me); 4 (It describes me really well). It was considered that students who responded from alternative 2 on are inclined to self-handicapping behavior, at some level, as they do not totally deny the statement.

The SSA consisted of 15 assertions that verified how respondents self-assessed in each self-handicapping behavior on the scale. Regarding the total items assessed in the SSA, 60% of the responses to the scale items were 1 – It has nothing to do with me; 23% pointed out 2 – It has little to do with me; 11% chose 3 – It has to do with

me; and 6% considered 4 – It describes me really well. Thus, students who responded to the SSA items in the interval between scales '2' and '4' were considered inclined to self-handicapping behavior. Those who answered '1' to the SSA items were considered not inclined to self-handicapping. Therefore, a total of 40% of responses to the SSA items identify, at some level, self-handicapping behavior in the academic pathway and 60% of responses to the SSA items do not identify self-handicapping attitudes during academic education.

Respondents who showed greater inclination to self-handicapping behavior pointed out a greater number of responses to items related to the factor "time management issues and proper preparation of academic activities (AS\_A)" (71% of the total responses on scales 2 to 4) than to the factor "issues related to attention control and concentration (AS\_B)" (29% of the total responses on scales 2 to 4). The behaviors most frequently reported by students in the first factor mentioned above correspond to the following attitudes: "Some students study on the eve of assessments. If they do poorly, they say they did not have enough time to study all the material;" "Some students do not read the texts recommended by professors before classes. If they do poorly in the assessment, they say it was because the texts were too boring;" "Some students do not invest enough time in carrying out important work and if the result is not good they say they did not get involved;" and "Some students postpone doing important tasks until the deadline set by the professor. If they do poorly, they say the task was done at the last minute."

Although the self-handicapping attitudes related to controlling attention and concentration were less noticed by students, the attitudes with higher scores on this scale factor were: “Some students use the phone during class. If they do not have a good result, they say it was because they did not understand the professor’s explanation,” “Some students go for walks even when they have important tasks to do. If they have a poor result on tasks, they say they had little time to do it” and “Some students report that they have to stay with their friends and/or boyfriend/girlfriend. If they do not do a good job, they say they did not have time to invest in their studies.”

Next, the descriptive results of responses on the academic path scale are displayed, with the frequencies of the main items on the scale.

### 4.3 Academic Path

The response alternatives on the academic path assessment scale range from 1 (Strongly disagree) to 5 (Strongly agree). Responses to alternatives 1 and 2 on the scale were considered negative for the item assessed, therefore unfavorable to the academic path. Responses to alternatives 4 and 5 on the scale were considered positive for the item assessed and, therefore, favorable to the academic path.

Data revealed that the students’ assessment in relation to academic life, in general, is favorable to the academic path, since most of the responses are concentrated in the items that demonstrate agreement with the assertions of the ALAS in scales 4 and 5 (63% of the responses). So, in general, students consider themselves integrated into academic life.

The factors “commitment to the course (TA\_B),” “student skill (TA\_C),” and “university setting (TA\_A)” had a better assessment and demonstrated greater integration into academic life by students, with 37%, 22%, and 21%, respectively, of responses concentrated on scales 4 and 5. The factors “involvement in non-compulsory activities (TA\_D)” and “study conditions, and academic achievement (TA\_E)” had a lower percentage of responses on scales 4 and 5, with 13% and 7%, respectively.

The items that stood out the most in relation to the university setting (TA\_A) were: “I do not feel comfortable in the university setting. (Inverted),” “Even if I could, I would not change universities,” and “I am satisfied with the performance of professors.” Regarding commitment to the course (TA\_B), the most outstanding items were: awareness that the subjects are important for vocational education, interest in professional activities, and personal

interest in the course. As for student skill (TA\_C), the most outstanding items were: “I can relate the various subjects in my course” and “I can clarify doubts regarding the content of the subjects.”

In the factors “involvement in non-compulsory activities (TA\_D)” and “study conditions, and academic achievement (TA\_E),” the responses were concentrated in unfavorable items, and this is worrying, since the lack of student engagement and involvement tends to hinder integration into academic life. The items that students most identified with low involvement in non-mandatory activities were: “I do not attend social, cultural, or sports events promoted by the University. (Inverted),” “I take part in cultural and artistic activities held by the university,” and “I have not attended academic events (seminars, lectures, study weeks) held by the university. (Inverted).” These data reveal that students have poor participation in events held by the university, whether they are aimed at academic, sports, social, or cultural integration.

The most negatively highlighted items in the questions that assess the “study conditions, and academic achievement” were: “I have had difficulties in carrying out work tasks and study activities. (Inverted)” and “I feel sleepy during classes. (Inverted).” These responses may be associated with the fact that the courses under analysis take place at night and most students work during the day.

Next, the measurement model used to estimate the effect of self-handicapping on the academic path is introduced and discussed.

### 4.4 Measurement Model

The first step in the PLS consisted of assessing factor loadings, reliability, and validity (Hair et al., 2019). Initially, necessary adjustments were made to the model, mainly excluding items from the first-order constructs that had relatively low factor loadings ( $< 0.60$ ) (Hair et al., 2017). Thus, 13 items were excluded from the total of 50 items in the instrument, namely: 1 item from the Self-handicapping construct and 12 items from the Academic path construct. The total number of exclusions was around 26%, which according to Hair et al. (2009) may be justified as a small modification in the model and accepted in exploratory research. In comparison, exclusions of around 30% were found in the literature, which did not affect the modeling (Schroeder & Sims, 2018).

After excluding the 13 items, the remaining items in the first-order constructs showed acceptable factor loadings ( $\geq 0.60$ ) in their respective constructs (Hair et al., 2017). It is worth noticing that “the relationships between the

second-order latent variable (LV) and its dimensions (first-order LV) must be interpreted and used as factorial loads (they are not hypotheses)” (Bido & Silva, 2019, p. 509). Although one of the first-order constructs (TA\_D) had a relatively low factorial load ( $\lambda = 0.445$ ), it was maintained so as not to impair content validity (Bido & Silva, 2019).

Table 2 displays the measurement model, in which Panel A displays the range of factor loadings for first-order constructs in relation to second-order constructs, while Panel B displays the range of factor loadings for first-order constructs.

**Table 2**  
Measurement model

Panel A: Reliability and validity of second-order constructs											
	$\lambda$	$\alpha$	CR	AVE	1.AS	2.TA					
1.AS	[0.892;0.921]	0.901	0.902	0.822	<b>0.907</b>						
2.TA	[0.445;0.816]	0.870	0.812	0.473	-0.403	<b>0.688</b>					
Panel B: Reliability and validity of first-order constructs											
	$\lambda$	$\alpha$	CR	AVE	AS_A	AS_B	TA_A	TA_B	TA_C	TA_D	TA_E
AS_A	[0.629;0.750]	0.859	0.890	0.505	<b>0.711</b>						
AS_B	[0.639;0.798]	0.846	0.884	0.522	0.646	<b>0.722</b>					
TA_A	[0.699;0.753]	0.687	0.809	0.514	-0.251	-0.185	<b>0.717</b>				
TA_B	[0.661;0.879]	0.858	0.895	0.591	-0.297	-0.274	0.471	<b>0.769</b>			
TA_C	[0.603;0.811]	0.799	0.862	0.558	-0.431	-0.147	0.461	0.483	<b>0.747</b>		
TA_D	[0.687;0.921]	0.827	0.880	0.650	-0.151	-0.121	0.221	0.126	0.265	<b>0.806</b>	
TA_E	[0.744;0.798]	0.667	0.816	0.597	-0.360	-0.182	0.330	0.310	0.468	0.311	<b>0.773</b>

**Note:** Values in bold on the diagonal represent the square root of AVE, to access the Fornell-Larcker criterion. Factor loadings ( $\lambda$ ) of first-order constructs in relation to second-order constructs: AS\_A = 0.921; AS\_B = 0.892; TA\_A = 0.675; TA\_B = 0.799; TA\_C = 0.816; TA\_D = 0.445; TA\_E = 0.639.

$\lambda$  = Factor loadings;  $\alpha$  = Cronbach's alpha, CR = Composite reliability, AVE = Average variance extracted, AS = Autossabotagem (Self-handicapping), TA = Trajetória acadêmica (Academic path).

**Source:** Prepared by the authors.

As for the reliability of the model's internal consistency, Cronbach's alpha ( $\alpha$ ) and Composite reliability (CR) are assessed. As much as the literature suggests more than 0.7 for these indexes (Hair et al., 2019), values between 0.4 and 0.7 should only be excluded if they give rise to a significant increase in AVE (Bido & Silva, 2019). It is noticed that all constructs have a satisfactory CR and only the  $\alpha$  for TA\_A (0.687) and the  $\alpha$  for TA\_E (0.667) below 0.70, however they are close to the recommended level, in addition it is noticed AVE > 0.50 and CR > 0.70. For these cases and with few factor loadings below 0.70 (but above 0.60), the literature recommends that the model be maintained, i.e. the recommendation is that, whenever possible, the maximum number of indicators be maintained in the model so as not to impair content validity (Bido & Silva, 2019). Therefore, it can be inferred that the model's internal consistency demonstrates reliability (Hair et al., 2019).

Convergent validity must be attested by AVE values, in the first and second-order constructs, which must be greater than or equal to 0.50 (Hair et al., 2019). It is noticed that despite the AVE for the second-order

construct of TA being slightly below 0.50 (0.473), the literature accepts keeping the model. Little et al. (1999) suggest maintaining such variables, as these cutoff points are flexible, and maintaining more indicators becomes a viable alternative, and for this case there are few factor loadings below 0.70 and few (in this case only one) AVE minimally below 0.50. Thus, it may be concluded that there is convergent validity. Finally, discriminant validity can be observed by using the Fornell-Larcker criterion, in which the values on the diagonal in bold (AVE's square root) are superior to the correlations between constructs (Hair et al., 2017). Additionally, in non-tabulated analysis, a heterotrait-monotrait (HTMT) correlation ratio with values lower than 0.90 was found, which reinforces the discriminant validity (Hair et al., 2019).

#### 4.5 Structural Model and Hypothesis Test

The structural model's assessment begins with path analysis disposition (Table 3), with stipulated relation (AS TA), beta coefficient ( $\beta$ ),  $t$  statistics,  $p$  value,  $R^2$  and  $Q^2$ .

**Table 3**  
*Structural model*

Hypothesis	Beta ( $\beta$ )	T statistics	P value	R <sup>2</sup>	Q <sup>2</sup>
AS → TA	-0.403	6.992	0.000*	0.163	0.045

Note: \*  $p < 0.01$ .

Source: Prepared by the authors.

It can be seen in Table 3 that the relationship theorized by the model showed statistical significance at the 1% level, and it was then supported, suggesting that the use of self-handicapping strategies negatively affects the academic path of undergraduate students. The R<sup>2</sup>, the model's predictive power measure (Hair et al., 2017), may have a low (2%), a mid (13%), or a high (26%) explanatory power (Cohen, 1988). Thus, the R<sup>2</sup> for Academic path (16.3%) is considered to have mid explanatory power. As for predictive accuracy (Q<sup>2</sup>), which is a measure of predictive power, an acceptable value above zero was obtained (Hair et al., 2019) for Academic path (4.5%). The model's multicollinearity was also assessed, using the variance inflation factor (VIF). According to Hair et al. (2019), values lower than 3 indicate absence of multicollinearity. Since in the model there is only one

independent variable, the maximum VIF is 1, thus indicating absence of multicollinearity.

#### 4.5.1 Analysis by subgroups

In an additional way (Table 4), to verify whether the relationship found can differ between the respondents' gender and age groupings, an analysis of relationships previously stipulated by subgroups was performed (Horz et al., 2022; Lunkes et al., 2020), grouped by gender (male and female) and age (up to 25 years old and over 25 years old). As the study proposes to analyze undergraduate students in a general overview, the purpose of this segregation is to grasp possible differences regarding the effects of self-handicapping behavior according to respondents' gender and age.

**Table 4**  
*Analysis by subgroups*

Panel A: Analysis of subgroups by gender						
	Male (n = 98)			Female (n = 114)		
Relationship	Beta ( $\beta$ )	T statistics	P value	Beta ( $\beta$ )	T statistics	P value
AS → TA	-0.481	6.627	0.000*	-0.369	4.072	0.000*
Panel B: Analysis of subgroups by age						
	Up to 25 years (n = 113)			Over 25 years (n = 99)		
Relationship	Beta ( $\beta$ )	T statistics	P value	Beta ( $\beta$ )	T statistics	P value
AS → TA	-0.373	4.919	0.000*	-0.430	4.712	0.000*

Note: \*  $p < 0.01$ .

Source: Prepared by the authors.

When analyzing Table 4, it is observed that self-handicapping is more likely to negatively affect the academic path of older or male students. The relationship tested between self-handicapping and academic path regarding the gender subgroup showed a negative effect with a Beta ( $\beta$ ) of -0.481 for males and a Beta ( $\beta$ ) of -0.369 for females. In the age subgroup test, the relationship between self-handicapping and academic path showed a negative Beta ( $\beta$ ) of -0.373 for ages up to 25 years and a negative Beta ( $\beta$ ) of -0.430 for those over 25 years. Therefore, the influence of self-handicapping on the

academic path is stronger in the group of male students and in students aged over 25 years.

## 4.6 Discussion of Results

Self-handicapping in the academic context has been investigated, mainly in the international literature, due to the frequency with which students have used these strategies and the implications of this behavior in carrying out activities related to academic life (Ganda & Boruchovitch, 2016; Martin et al., 2001). According to

the Self-Value Theory, fear of failure can lead students to seek ways to protect their self-worth (Berglas & Jones, 1978; Covington, 1984).

The need to protect self-worth is part of human nature and is the root of self-protection mechanisms, thus, in the face of challenging situations in academic life, such as poor academic performance, learning difficulties, anxiety, stress, or fear of failure, students may resort to self-worth protective behaviors (Covington, 1984, 1992), and one of them is self-handicapping.

The results prove the negative effect of self-handicapping on the academic path, which supports the hypothesis proposed in this study. This finding is supported by the literature, since several factors in the students' academic path may influence their academic behavior, such as the way students notice and experience the university setting, the level of anxiety generated by this environment (Cano et al., 2018), learning quality (Elliot & Church, 2003), health, and psychological well-being (Sahranç, 2011).

Self-handicapping strategies identified and used by students affect learning and impair performance,

persistence in staying in the course, health, well-being, and self-confidence (Leary & Shepperd, 1986; Török et al., 2018). So, data from this study reveal the importance of investigating academic growth, since several factors may lead to self-handicapping behavior, preventing a successful academic path. Students who are aware of the existence of self-handicapping strategies and their use are expected to be more willing to change their attitudes.

The results found in this research are close to the findings of Ganda and Boruchovitch (2015) who, even having found a low level of self-handicapping behavior in the sample under analysis, found that procrastination and lack of reading of texts assigned by professors were the main self-harming attitudes taken by the participants.

Although no research has directly examined the effect of self-handicapping on academic careers, the negative relationship between the two parallels the findings of Martin et al. (2001), who found a negative influence of self-handicapping on the academic results of undergraduate students.

## 5. STUDY CONCLUSIONS

This study analyzed the effect of using the cognitive self-handicapping strategy on the academic path of undergraduate students in Business courses. The theoretical background was built through the literature on self-handicapping, Self-Valor Theory, and academic path, in the various dimensions that allow grasping how students experience the university setting and make their choices in academic life.

The evidence found allows us to claim that there is a negative and significant effect of resorting to self-handicapping strategies on the academic path of students in the Business area in the courses under analysis. Also, it was found that this effect is greater when analyzed in the group of male students and among students over 25 years old. Thus, it is understood that this group of students requires greater attention from Higher Education institutions, course coordinations, and professors.

As implications of the results of this research, this study may contribute to instigating the taking of actions to prevent and/or reduce self-handicapping behavior, support academic motivation, and enable a successful academic path. In this line, the building of pedagogical projects or programs, aimed at knowing the profile of students who use self-handicapping strategies, can help them to fight self-handicapping behavior and achieve academic goals. As seen in the literature, programs that specifically focus on reducing self-handicapping found

significant results in a few weeks through workshops and training sessions not only significantly reduced the use of self-handicapping, but also increased student motivation at the end of the programs.

Self-handicapping prevention actions may contribute to quality learning, improve students' integration and motivation with academic life, in addition to improving students' health and psychological well-being.

The results of this research are relevant for the Business area, as it is primarily responsible for educating managers and organizational leaders. As pointed out in the literature, the negative effect of the use of self-handicapping strategies on the academic path of prospective managers may extrapolate the academic setting and prove to be similarly harmful in the social and affective relationships of organizational leaders, and may also imply non-assertive decision-making, as well as in the economic bankruptcy of organizations, caused by non-compliance with organizational goals and results.

Some research limitations are indicated. First, it is estimated that the coronavirus disease 2019 (COVID-19) pandemic, regarded as a pandemic context of a world order, caused the change from a face-to-face teaching model to remote teaching, which may have affected the students' responses in relation to the scalar assertions that constitute the instruments, causing the exclusion of assertions. Another limitation may be attributed to the scale used to

analyze self-handicapping behavior. Although the basis for the scale of Portuguese Higher Education was Brazilian, the scale validated by Portuguese Higher Education was used, thus possibly lacking some specifications for Brazilian Higher Education. Furthermore, sample size and the delimitation of a single Higher Education institution may not provide a holistic view of the Brazilian reality as a whole.

In further research, it is suggested to combine qualitative methodologies to include observations in the classroom and interviews with students to better understand the self-handicapping phenomenon and its implications. It is

also suggested to increase the sample, in terms of number of respondents and undergraduate courses. Another point to consider is that it would be interesting to be able to follow the students individually or in groups and during several semesters, in order to better visualize possible changes in self-handicapping behavior over time, if any. Finally, considering new samples and perspectives could be a natural pathway for further investigation. Along with this, considering segregated and/or comparative analyses by courses within the scope of the Business area could provide findings with greater richness.

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