Characterization of time management strategies and academic procrastination of undergraduate students

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Abstract
The objective of this research was to understand the time management and academic procrastination behaviors of undergraduate students and analyze them in relation to sociodemographic and academic life variables. Participants included 238 students from a public university, who completed a sociodemographic questionnaire and a time management and academic procrastination scale. Descriptive, comparative, and correlational analyses were performed using the Statistical Package for the Social Sciences. The results showed moderate levels of time management and academic procrastination. Statistically significant differences were found when comparing the scale with the variables: type of high school, self-perceived grades, and degree of intention to continue the course. Significant, negative, and high-magnitude correlations were found between time management and academic procrastination. It is suggested that interventions be developed for the groups with lower time management scores.

Keywords
self-regulated learning; study habits; sociodemographic variables; future teachers.

Caracterização das estratégias de gerenciamento do tempo e da procrastinação acadêmica de estudantes de licenciatura

Resumo
O objetivo da pesquisa foi conhecer os comportamentos de gerenciamento do tempo e de procrastinação acadêmica de licenciandos e analisá-los em relação às variáveis sociodemográficas e de vida acadêmica. Participaram do estudo 238 estudantes de uma universidade pública, os quais responderam a um questionário sociodemográfico e a uma escala de gerenciamento do tempo e procrastinação acadêmica. Análises descritivas, comparativas e correlacionais foram realizadas utilizando o programa estatístico *Statistical Package for the Social Sciences*. Os resultados mostraram níveis moderados de gerenciamento do tempo e de procrastinação acadêmica. Diferenças estatisticamente significativas foram encontradas ao comparar a escala com as variáveis: tipo de escola do Ensino Médio, autopercepção das notas e grau de intenção de continuar o curso. Correlações significativas, negativas e de magnitude alta foram encontradas entre o gerenciamento do tempo e a procrastinação acadêmica. Sugere-se que intervenções sejam desenvolvidas com os grupos que apresentaram escores mais baixo de gerenciamento do tempo.

Palavras-chave

autorregulação da aprendizagem; hábitos de estudo; variáveis sociodemográficas; futuros professores.

Caracterización de las estrategias de gestión del tiempo y procrastinación académica de estudiantes universitários

Resumen
El objetivo de esta investigación fue comprender las conductas de gestión del tiempo y procrastinación académica de estudiantes universitarios y analizarlas en relación con variables sociodemográficas y de la vida académica. Participaron 238 estudiantes de una universidad pública, quienes completaron un cuestionario sociodemográfico y una escala de gestión del tiempo y procrastinación académica. Se realizaron análisis descriptivos, comparativos y correlacionales utilizando el Paquete Estadístico para las Ciencias Sociales. Los resultados mostraron niveles moderados de gestión del tiempo y procrastinación académica. Se encontraron diferencias estadísticamente significativas al comparar la escala con las variables: tipo de bachillerato, calificaciones autopercibidas y grado de intención de continuar el curso. Se encontraron correlaciones significativas, negativas y de alta magnitud entre la gestión del tiempo y la procrastinación académica. Se sugiere desarrollar intervenciones para los grupos con puntuaciones más bajas en gestión del tiempo.

Palabras clave
aprendizaje autorregulado; hábitos de estudio; variables sociodemográficas; futuros docentes.

1 Introduction

Higher Education has shown a significant increase in enrollment over the years. The 2024 Higher Education Census indicated that from 2022 to 2023 there was a 5.6% growth in the number of enrollments at this level of education, reaching the mark of more than 9.9 million students (Inep, 2024). The growing search for higher education raises the need to analyze more closely the processes related to the learning of students at this level of education (Arcoverde *et al.*, 2022; Franciscão; Boruchovitch, 2023; Frison; Boruchovitch; Goes, 2024).

In the literature, different psychological theories that investigate learning can be found. This research is based on the theoretical assumptions of Social Cognitive Theory (SCT) to explain learning and understands that it can occur by direct action, but mostly by vicarious experiences (Bandura, 1986). In addition, it recognizes that human functioning, among them the learning process, can be explained through triadic reciprocity. Triadic

reciprocity is made up of personal, behavioral, and environmental factors. Personal factors involve each person's beliefs and expectations; environmental factors refer to the resources and physical environment of which each person is a part; and behavioral factors consist of the way the individual acts and behaves in the face of what is around them (Bandura, 1977).

Zimmerman (1998, 2013), based on the theoretical assumptions of CST, mainly on the construct of self-regulation of behavior developed by Bandura (1978), proposed the construct of self-regulation of learning and defined it as the self-control of human beings over their behaviors, feelings and thoughts, aiming to achieve a previously established academic or school goal. In the process of self-regulation of learning, three cyclical phases are present: task analysis, performance and self-reflection. In the task analysis phase, the student analyzes what he/she needs to accomplish in the task, outlines objectives to complete it, and selects some learning strategies to fulfill it. At this stage, motivational beliefs are also considered, that is, self-efficacy and expectations of results. The second phase consists of performing the task. At this stage, focus, voluntary attention, self-control, the application of learning strategies and self-observation come into play. In the third and last stage, when the task has already been completed, the student makes a self-assessment about their performance on the task, considering what was good and what was not, aiming at improving the process over time. Faced with the self-assessment and the judgments that the student makes, he will have some reactions, which will influence the beginning of a new learning cycle (Zimmerman, 1998, 2013).

During the self-regulatory process, the student can use different learning strategies (Franciscão; Boruchovitch, 2023; Góes; Boruchovitch, 2020; Nachtigall; Abrahão, 2021; Silva *et al.*, 2025), highlighting among them the time management strategy. Managing time can be defined as the act of undertaking efforts intentionally and efficiently in academic tasks, aiming at increasing the probability of achieving a goal, which is learning, within a given time (Wolters; Won; Hussain, 2017).

The ability to manage time requires the student to self-assess their own planning, as well as analyze the results obtained and consider possible changes or permanence for future activities. Following a routine with schedules, as well as organizing time, are also important points for effective time management (Ferraz; Santos; Noronha, 2023; Schunk;

Usher, 2012). Wolters, Won and Hussain (2017) state that self-regulation is essential for good time management. Self-regulated students manage time through the demands of the task and the results they expect to achieve (Adams; Blair, 2019; Ferraz; Santos; Noronha, 2023).

Many studies have shown that there is a strong correlation between good time management and academic performance (Adams; Blair, 2019; Boruchovitch *et al*., 2020; Britton; Tesser, 1991; Wolters; Won; Hussain, 2017). However, Oliveira *et al*. (2016) and Soares *et al*. (2022) state that, still in Higher Education, one of the main complaints of students from different areas of knowledge is the difficulty in managing time in the face of numerous university demands. Thus, when seeking more effective learning at this level of education, it is necessary to teach and promote the teaching of time management strategies in undergraduate classrooms, especially in undergraduate courses, not only with the intention that students present a more significant academic performance, but also that they can, when in action, promote and teach time management strategies to their future students (Dembo, 2001; Franciscão; Boruchovitch, 2023).

Soares *et al*. (2022) presented three benefits related to time management: reducing procrastination, reducing stress and anxiety, and increasing productivity. Research has emphasized that most undergraduate students procrastinate in their academic tasks (Costa *et al*., 2022; Franciscão; Boruchovitch, 2023). This data may indicate inadequate or non-existent time management. Pereira and Ramos (2021) state that the way the individual manages the time to perform a given task is relevant to the analysis and understanding of academic procrastination.

Academic procrastination is defined as a non-strategic postponement of the beginning or completion of academic tasks, to carry out irrelevant activities, even if they result in negative consequences (Sampaio; Polydoro; Rosário, 2012; Schouwenburg, 2004). This phenomenon is generally detrimental to academic performance (Nachtigall; Abrahão, 2021; Schouwenburg, 2004), due to the fact that it is not strategic (Sampaio; Polydoro; Rosário, 2012).

Students who exhibit procrastinatory behaviors have greater difficulty managing their time and are more easily distracted, leading them to replace academic activities with more attractive options, such as the use of the internet and social media, time with

friends, television, among others (Costa *et al*., 2022; Sampaio; Polydoro; Rosário, 2012). This can all generate difficulties in carrying out academic tasks, since the more one procrastinates, the greater the tendency to absorb the contents superficially and, consequently, to have a lower performance than what could be achieved (Sampaio; Polydoro; Rosário, 2012). In addition, having the habit of procrastinating can lead the student to develop harmful emotional states, such as anxiety, stress, depression, exhaustion, impaired attention and reduced interest in academic activities (Pereira; Ramos, 2021).

Academic procrastination as well as inadequate time management are often associated with failure in the self-regulation process (Costa *et al*., 2022; Geara; Hauck Filho; Teixeira, 2017; Pereira; Ramos, 2021). Nachtigall and Abrahão (2021) and Sampaio, Polydoro and Rosário (2012) indicate that students who use self-regulatory strategies tend to procrastinate less. In addition to the failure in the self-regulation process, Fior *et al.* (2022), Pereira and Ramos (2021) and Vieira-Santos and Malaquias (2022) identified other predictors of academic procrastination, namely: lack of time, dissatisfaction, low academic achievement, low self-efficacy, anxiety, age, gender, lack of task engagement, poor learning strategies, number of tasks and lack of academic objectives.

Although there are some studies that investigate academic procrastination, there are few that focus on analyzing it in undergraduate courses (Callan; Shim, 2019; Machado; Schwartz, 2018; Pereira; Ramos, 2021). Thus, conducting studies on this subject is essential, since they may contribute to a better understanding of the subject, as well as demonstrate the benefits of such constructs for the learning of undergraduate students, both for their initial training period and for their future professional performance. This is because students who develop self-regulatory skills during graduation can more easily identify the practices that help or hinder the teaching and learning process of their students, as well as perceive and think of solutions to the problems and challenges encountered in classrooms (Dembo, 2001; Zimmerman, 2013).

Considering the importance of time management and the consequences of academic procrastination in the learning process of undergraduate students, a more in-depth study of such behaviors is essential. Given this context, this research was

proposed, guided by the objectives of knowing the time management and academic procrastination behaviors of undergraduate students and analyzing them in relation to sociodemographic and academic life variables.

2 Methodology

This research can be defined as exploratory, descriptive and comparative, with analysis of quantitative data. According to Gerhardt and Silveira (2009), exploratory research aims to provide greater familiarity with the problem, with a view to making it more explicit. Because it is descriptive and comparative, it also seeks to describe the facts and phenomena of a given reality, aiming to compare them with some important variables suggested by the literature. Below, more information will be presented about the conduct of the research.

2.1 Participants

The sample consisted of 238 students from nine undergraduate courses offered by a university located in the interior of the state of Paraná. Of the total number of students, 106 (44.5%) were from the Pedagogy course, 33 (13.9%) from the Biological Sciences, 28 (11.8%) from the Chemistry course, 27 (11.3%) from the Literature course, 11 (4.6%) from History, nine (3.8%) from Physics, nine (3.8%) from Social Sciences, eight (3.4%) from Geography and seven (2.9%) from the Arts course. The age of the participants ranged from 18 to 63 years, with a mean age of 22.9 years.

Most participants were female (n=171; 71.8%), worked (n=149; 62.6%), self-identified as white (n=163; 68.5%), were taking a course in the Human Sciences area (n=161; 67.6%) and attended undergraduate courses at night (n=127; 53.4%).

2.2 Data collection instruments

To carry out the research, the following data collection instruments were used.

2.2.1 Sociodemographic questionnaire for university students (Boruchovitch, 2018)

The questionnaire was developed by Boruchovitch (2018) and applied with the objective of characterizing the student who participated in the research. Among the questions that make up the questionnaire, we can mention as an example: gender, age, ethnicity, course, area of knowledge, intention to continue the course, work or not and type of school held in High School.

2.2.2 Academic time management and procrastination scale (Marconi; Bzuneck; Rufini, 2022)

The scale consists of 15 items that seek to know the time management and academic procrastination behaviors of university students. It is a Likert-type scale with five response options, ranging from “not at all true” (1) to “totally true” (5). The scale is composed of two subscales: time management and procrastination.

The time management subscale has six items. The procrastination subscale has nine items. The items of the two subscales were developed using instruments already validated in the relevant literature. To interpret the results of the scale, it should be considered in the time management subscale that the higher the average, the more students manage time and, in procrastination, the higher the average, the more they procrastinate on academic tasks.

2.3 Data Collection procedure

Initially, the project was processed and approved by the Ethics Committee involving Human Beings, according to the Certificate of Presentation of Ethical Appreciation (CAAE) No. 77242024.1.0000.5231. Subsequently, the second author of the research contacted the university's Study Centers that offer undergraduate courses, presented them with the research objectives and data collection procedures and scheduled with the professors the days of best convenience for data collection. The application of the data collection instruments occurred in two ways and the choice was at the discretion of the teacher responsible for the class. Thus, the collection took place both in the classroom, through the availability of the Google Forms *link* that housed the research, and from the sending of this *link* to the students' *email* .

The first author of the study was present in all collections that occurred in the classroom. At these times, the same procedures were followed in all classes: presentation of the researcher to the class, explanation of the research objectives and clarification that participation in the research was voluntary. Subsequently, the Google Forms *link* that housed the research was made available to students.

When accessing the *link*, the first screen presented the Informed Consent Form (ICF), which contained the main information related to the research and the *email* of the researcher in charge to contact in case of doubts. When agreeing to participate in the survey, a new screen was presented. On this screen, students had access to the sociodemographic questionnaire. After completing it, a new screen was opened displaying the second instrument, the Time Management and Procrastination Scale. The duration of data collection was approximately 15 minutes.

2.4 Data analysis procedures

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) statistical program. Descriptive analyzes were performed, in which the means, medians, standard deviations, Cronbach's Alpha values and minimum and maximum values were calculated.

Comparative analyses based on sociodemographic variables were performed. Thus, after verifying that the data did not present a "Normal" distribution, by the values obtained in the Shapiro-Wilk and Kolmogorov-Smirnov tests, the Mann-Whitney tests were applied to compare the variables between two groups and the Kruskal-Wallis test to compare the variables between three groups. Correlation analyses were performed using the Spearman correlation test, considering the values proposed by Cohen (1988) to interpret the values obtained: values between 0.10 and 0.29 – non-existent or small correlation; values between 0.30 and 0.49 – moderate correlation; and values between 0.50 and 1 – high correlation. Next, the results obtained in the research will be presented.

3. Results and Discussion

Table 1 presents Cronbach's Alpha values, means, medians, standard deviations, minimum and maximum values of the subscales and items of the Time Management and Academic Procrastination Scale.

Table 1 – Overall and itemized results of the Academic Time Management and Procrastination Scale

Subscales	Alpha	Items	Average	Mdn	Dp	Min	Max.
Time Management	0.749	1	2.85	3.00	1.46	1.00	5.00
		2	3.87	4.00	1.24	1.00	5.00
		3	3.16	3.00	1.44	1.00	5.00
		4	2.54	2.00	1.47	1.00	5.00
		5	4.26	5.00	1.01	1.00	5.00
		6	2.79	3.00	1.35	1.00	5.00
Total subscale 1			3.24	3.33	0.68	1.50	4,83
2 – Academic procrastination	0.894	7	3.18	3.00	1.40	1.00	5.00
		8	3.73	4.00	1.31	1.00	5.00
		9	3.35	4.00	1.42	1.00	5.00
		10	3.24	3.00	1.42	1.00	5.00
		11	3.84	4.00	1.22	1.00	5.00
		12	3.11	3.00	1,43	1.00	5.00
		13	3.48	4.00	1.30	1.00	5.00
		14	3.82	4.00	1.21	1.00	5.00
		15	2.37	2.00	1.44	1.00	5.00
Total subscale 2			3.34	3.44	0.99	1.00	5.00

Legend: Mdn: median; SD: standard deviation; min: minimum; max: maximum.
Source: Authors (2025).

The data in Table 1 make it possible to visualize that the scale presents reliability, since the Cronbach's Alpha value of the first subscale was 0.749 and that of the second subscale was 0.894. Such values are considered acceptable for research in the area of Human Sciences (Pestana; Gageiro, 2014).

Regarding the mean and median of the subscales, higher values were found in the academic procrastination subscale (M=3.34; Mdn=3.44), followed by time management (M=3.24; Mdn=3.33). These values seem to point to moderate use of time management and academic procrastination. Results contrary to the present study were identified by Boruchovitch *et al*. (2020), Frison, Boruchovitch and Góes (2024), Santos (2023), Silva *et al.* (2025), Vieira-Santos and Malachi (2022) and Wolters, Won and Hussain (2017).

Santos (2023), Vieira-Santos and Malaquias (2022) and Wolters, Won and Hussain (2017) identified high rates of academic procrastination among undergraduate students. Silva *et al.* (2025) found low rates of use of dysfunctional learning strategies

among university students. Boruchovitch *et al*. (2020) and Frison, Boruchovitch and Góes (2024) found low averages in the time management strategy.

For a better understanding of the data found, considering the proximity of the mean and median values in the two subscales analyzed, the correlation between the two constructs was calculated. Correlation values indicated a significant, negative and high magnitude correlation between academic procrastination and time management (r=-0.512; p=0.001). This means that the more students manage time, the less they procrastinate academically, and vice versa. These findings converge with the literature that points out that students who manage time procrastinate less (Edwards; Martin; Shaffer, 2015; Oliveira *et al*., 2016; Soares *et al*., 2023; Vieira-Santos; Malaquias, 2022; Wolters; Won; Hussain, 2017).

The analysis of the items that make up the scale revealed that the item with the highest average in subscale 1 was 5: “I always finish academic work within the established deadline” (M=4.26; Mdn=5.00) and the lowest average was item 4: “I do not usually plan the academic activities I have to fulfill” (M=2.54; Mdn=2.00). It is noteworthy that item 4 has an inverted score, which causes the logic of data interpretation to change. The results by item seem to indicate that students usually finish their work on time and plan the activities they need to fulfill. Kaveski and Beuren (2020) found different results when they found that students who procrastinate usually have difficulties in completing tasks within the established deadlines.

In subscale 2, the item with the highest average was 11: “I often find myself lost among the many academic tasks I have to deal with” (M=3.84; Mdn=4.00), while the item with the lowest average was item 15: “I am not very good/good at meeting deadlines” (M=2.37; Mdn=2.00). These values seem to show that, even getting lost due to the number of demands required by graduation, students usually meet the deadlines, a result that can be explained by factors external to the task, such as the loss of the grade, if the activity is not delivered on time (Wolters; Won; Hussain, 2017).

Table 2 below shows the results of the comparisons of the scores in subscales 1 and 2 with the sociodemographic variables.

Table 2 – Comparison of time management and academic procrastination subscales with sociodemographic variables

Subescalas	Tipo de escola no Ensino Médio							Idade				
	Escola Particular (n-57)		Escola Pública (n=171)		Escola pública e particular (n=10)		Valor de p	≤ 22 anos (n=166)		>23 anos (n=72)		Valor de p
	Média	Mdn	Média	Mdn	Média	Mdn		Média	Mdn	Média	Mdn	
1	3,25	3,33	3,25	3,33	3,10	3,25	0,797	3,27	3,33	3,37	3,44	0,363
2	3,61	3,77	3,23	3,11	3,69	3,67	0,026*	3,18	3,16	3,26	3,16	0,368

Subescalas	Autopercepção das notas							Gênero						
	Bem acima/Acima da média (n=158)		Na média (n=65)		Abaixo /Bem abaixo da nota média (n=5)		Valor de p	Feminino (n=171)		Masculino (n=65)		Não binário (n=2)		Valor de p
	Média	Mdn	Média	Mdn	Média	Mdn		Média	Mdn	Média	Mdn	Média	Mdn	
1	3,33	3,33	3,10	3,00	2,76	2,83	0,011*	3,22	3,33	3,33	3,33	2,66	2,66	0,204
2	3,18	3,11	3,61	3,66	4,40	4,55	0,001*	3,30	3,33	3,44	3,66	3,22	3,22	0,630

Subescalas	Grau de intenção de continuar o curso							Trabalhador				
	Nenhuma/modera da intenção (n=38)		Muita/Muitíssima intenção (n=65)		Total intenção (n=135)		Valor de p	Sim (n=149)		Não (n=89)		Valor de p
	Média	Mdn	Média	Mdn	Média	Mdn		Média	Mdn	Média	Mdn	
1	3,00	2,83	3,27	3,33	3,30	3,33	0,044*	3,22	3,33	3,28	3,33	0,664
2	3,75	3,77	3,25	3,11	3,27	3,33	0,023*	3,31	3,33	3,38	3,55	0,496

Subescalas	Área do curso									Identidade racial				
	Artes (n=7)		Biológicas (n=33)		Exatas (n=37)		Humanas (n=161)		Valor de p	Branco (n=163)		Não branco (n=74)		Valor de p
	Média	Mdn	Média	Mdn	Média	Mdn	Média	Mdn		Média	Mdn	Média	Mdn	
1	3,16	3,16	3,30	3,33	3,29	3,33	3,23	3,33	0,969	3,24	3,33	3,25	3,33	0,707
2	2,98	2,77	3,57	3,66	3,32	3,44	3,31	3,33	0,310	3,32	3,44	3,36	3,33	0,860

Subescalas	Período do curso								
	Matutino (n=79)		Vespertino (n=14)		Noturno (n=127)		Integral (n=18)		Valor de p
	Média	Mdn	Média	Mdn	Média	Mdn	Média	Mdn	
1	3,36	3,33	3,33	3,50	3,17	3,16	3,25	3,33	0,328
2	3,23	3,11	3,28	2,84	3,36	3,44	3,64	3,72	0,513

Key: The level of significance considered was <0.05.
Source: Authors (2025).

As can be seen in Table 2, statistically significant differences were found in the subscales of the Academic Time Management and Procrastination Scale, when compared with the sociodemographic variables: type of school in high school, self-perception of grades and degree of intention to continue the course.

In the sociodemographic variable “type of school in high school”, statistically significant differences were observed only when compared to the academic Procrastination subscale. This difference seems to suggest that students who attended high school in a public school (M=3.23; Mdn=3.11) procrastinate less than those who did so in a private school (M=3.61; Mdn=3.77). A survey carried out by the Todos pela Educação Institute (2022) found that 32% of students in public high schools work, unlike what happens, most of the time, among those in private schools. These data may explain why public-school students procrastinate less, because they have, since high school, a

more limited time to dedicate to their studies, possibly creating more appropriate strategies to control procrastination. The results seem to indicate, however, that although public school students procrastinate less, this does not mean that they manage time better than their private school peers, since no significant differences were found in the time management subscale.

Regarding the variable "self-perception of grades", statistically significant differences were found in subscales 1 and 2. In the time management subscale, significant differences were observed between those who rated their grades above or well above average (M=3.33; Mdn=3.33) and those who perceived their grades as below or well below average (M=2.76; Mdn=2.83). Statistically significant differences were also identified when comparing students who rated their grades above or well above average (M=3.33; Mdn=3.33) and those who perceived them as average (M=3.10; Mdn=3.00). Given these results, it is noted that students who perceive themselves with the highest grades are those who manage time the most, while those who consider their grades average or below average manage time the least. Similar results were found by Adams and Blair (2019) and Boruchovitch *et al*. (2020). On the other hand, Frison, Boruchovitch and Góes (2024) found no differences in the comparison of these variables.

In the academic procrastination subscale, students who rated their grades above or well above average (M=3.18; Mdn=3.11) demonstrated statistically significant differences when compared to those who considered their grades average (M=3.61; Mdn=3.66). Also noteworthy are the differences found between students who rated their grades above or well above average (M=3.18; Mdn=3.11) and those who considered their grades below or well below average (M=4.40; Mdn=4.55). These data seem to show that students who procrastinate the most consider their grades lower, consequently, those who procrastinate the least indicate having grades above average. Results in the same direction were found in the work of Sampaio, Polydoro and Rosário (2012) and Vieira-Santos and Malaquias (2022). Nachtigall and Abrahão (2021) highlighted the importance of adequate time management to avoid procrastination and have a good academic performance.

Regarding the degree of intention to continue in the course, statistically significant differences were identified in the time management subscale between students who had

no or moderate intention (M=3.00; Mdn=2.83) and those who had total intention to continue the course (M=3.30; Mdn=3.33). It is also worth mentioning the differences presented between students who demonstrated no or moderate intention to continue the course (M=3.00; Mdn=2.83) and those who have a lot or very much intention (M=3.27; Mdn=3.33). The data show that the students who reported having total, a lot or a lot of intention to continue the course are the ones who manage time the most, while those who indicated having no or moderate intention manage time the least. Similar results were found by Boruchovitch *et al.* (2020) and Frison, Boruchovitch and Góes (2024).

In subscale 2, undergraduate students who showed no or moderate intention to continue the course (M=3.75; Mdn=3.77) showed significant differences in relation to those who showed a lot or very much intention (M=3.25; Mdn=3.11). The students who reported having total intention to continue the course (M=3.27; Mdn=3.33) differed significantly from those who had no or moderate intention (M=3.75; Mdn=3.77). This shows that students who have the least intention of continuing their degree are the ones who procrastinate the most and that those who have the greatest intention of continuing the course procrastinate the least. Such behaviors may be associated with motivational factors, because, given the uncertainty of continuing or not taking the degree, many may lack motivation to carry out academic activities and, consequently, adopt procrastination behaviors at higher levels than those who intend to continue the course (Geara; Hauck Filho; Teixeira, 2017).

The results of the comparison of the scores obtained in subscales 1 and 2, with the sociodemographic variables age, gender, worker or not, course area, course period and racial identification, did not reveal statistically significant differences. As in this study, Boruchovitch *et al*. (2020) also found no statistically significant differences between time management and the variables age, gender, course period and racial identification. Santos (2023) also did not find a statistically significant difference between academic procrastination and gender, age and whether the student is a worker or not. Arcoverde *et al*. (2022), however, found statistically significant differences between time management and the course area. Fior *et al.* (2022) detected significant differences due to sociodemographic variables that showed that male students and younger students procrastinate more than women and older students.

4 Final considerations

The research was developed with the objective of knowing the time management and academic procrastination behaviors of undergraduate students of undergraduate courses and analyzing them in relation to the sociodemographic and academic life variables of the students. In summary, the results showed that undergraduate students present moderate time management and academic procrastination behaviors and that the more they manage time, the less they procrastinate, and vice versa. It was also found that undergraduate students, in general, even in the midst of difficulties due to academic demands, usually meet deadlines and deliver all activities.

When comparing the results of the scores of the time management and procrastination subscales with the sociodemographic variables age, gender, workers or not, course area, course period and racial identification, no statistically significant differences were found. When comparing the sociodemographic variables of self-perception of grades and degree of intention to continue the course, statistically significant differences were found in both the time management and procrastination subscales. In the sociodemographic variable type of school in which he attended high school, statistically significant differences were found only in the academic procrastination subscale.

The study presents relevant contributions, such as the need for psychopedagogical interventions to improve the time management strategies of undergraduate students to reduce procrastination rates, since the two factors are directly related. Specifically, it is important that such interventions be carried out on the investigated theme with students who attended high school in a private school, with those who presented low self-perception of grades and with those who reported low intention to continue graduation, while these are the ones that procrastinate the most and manage time the least. In addition, considering mainly the results related to the variable intention to continue the course, it is necessary that the interventional proposals also seek to strengthen students' motivation, together with time management.

The fact that the sociodemographic variables course period and course area did not reveal statistical differences with time management and procrastination is also an important contribution of the study, as they make it possible to break with the common sense understanding of the superiority of some students depending on the course area and the period in which it is carried out.

It is important to mention some limitations of this study. One of them is the lack of a balanced sample, for example, 71.8% of the participants were female, in addition to the fact that the number of undergraduate students from the Humanities was greater than that of the Exact Sciences. In addition, almost half of the students who answered the questionnaire were from the Pedagogy course, while the other 55.5% were divided among eight other courses. Another limitation that is worth mentioning is the use of self-report-only instruments; if other instruments were used, other results could be found.

For future research, it is indicated that there is a greater number of participants, especially from degrees other than Pedagogy, who use qualitative data collection instruments, together with quantitative ones; that psychopedagogical interventions are proposed among the groups that presented the lowest means in this study, as well as that the possible reasons for the absence of significant differences in variables such as age and *status* of workers, in relation to time management and procrastination, are explored more deeply.

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