

Assessing the role of academic procrastination and subjective well-being in predicting satisfaction with the postgraduate program

Avaliando o papel da procrastinação acadêmica e bem-estar subjetivo na predição da satisfação com o programa de pós-graduação

Evaluar el papel de la procrastinación académica y el bienestar subjetivo en la predicción de la satisfacción con el programa de postgraduación

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Abstract: The present study aimed to know the extent to which academic procrastination and subjective well-being are related to satisfaction with post-graduation. Participants were 263 postgraduate students, with a mean age of 29 years ($SD = 6.48$), with the majority of males (67.3%), single (60.1%) and the master (58%), who responded to the Academic Procrastination Scale, Scale of Satisfaction with the Postgraduate Program, Life Satisfaction Scale, Positive and Negative Affect Schedule and demographic questions. The results indicated that academic procrastination (-) and subjective well-being (+) predicted satisfaction with post-graduation. This tested model showed adequate fit indicators ($\chi^2/g. 1 = 3.18$, GFI = 0.98, CFI = 0.97, RMSEA = 0.048 and $P_{close} = 0.09$). It may be concluded that academic procrastination and subjective well-being are important variables to understand the satisfaction with the postgraduate, favoring interventions that provide better adaptation to the postgraduate context. show the validity of the MBPQS to assess the sensitivity of caregivers of children with ASD.

Keywords: life satisfaction, procrastination, well-being, postgraduate students

Resumo: O presente estudo objetivou conhecer em que medida a procrastinação acadêmica e o bem-estar subjetivo estão relacionadas com satisfação com a pós-graduação. Participaram 263 pós-graduandos, com idade média de 29 anos ($DP = 6.48$), sendo a maioria do sexo masculino (67.3%), solteira (60.1%) e no mestrado (58%), os quais responderam a Escala de Procrastinação Acadêmica, Escala de Satisfação com o Programa de Pós-Graduação, Escala de Satisfação com a Vida, Escala de Afetos Positivos e Negativos e perguntas demográficas. Os resultados indicaram que a procrastinação acadêmica se correlacionou negativamente com o bem-estar subjetivo e positivamente com a satisfação com a pós-graduação, sendo desta última preditor. Tal modelo testado apresentou indicadores de ajuste adequados [$\chi^2 (4) = 12.73$, $\chi^2/g1 = 3.18$, GFI = 0.98, AGFI = 0.93, CFI = 0.97, RMSEA = 0.091 (IC90% = 0.038-0.150) e $P_{close} = 0.09$]. Conclui-se que a procrastinação acadêmica e bem-estar subjetivo são variáveis importantes para compreender a satisfação com a pós-graduação, favorecendo intervenções que proporcionem melhor adaptação ao contexto de pós-graduação.

Palavras-chave: satisfação com a vida, procrastinação, bem-estar, pós-graduandos



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Resumen: El presente estudio tiene por objeto conocer en qué medida la procrastinación académica y el bienestar subjetivo están relacionados con la satisfacción con la posgraduación. Los participantes del estudio fueron 263 estudiantes de posgrado, con edad media de 29 años ($DE = 6.48$), siendo la mayoría del sexo masculino (67.3%), soltera (60.1%) y en el máster (58%), los cuales respondieron a la Escala de Procrastinación Académica, Escala de Satisfacción con el Programa de Postgrado, Escala de Satisfacción con la Vida, Escala de Afectos Positivos y Negativos y preguntas demográficas. Los resultados indicaron que la procrastinación académica (-) y el bienestar subjetivo (+) predijeron la satisfacción con el programa de postgrado. Este modelo probado presentó indicadores de ajuste adecuados ($\chi^2 / gl = 3.18$, GFI = 0.98, AGFI = 0.93, CFI = 0.97, RMSEA = 0.091 y Pclose = 0.09). Se concluye que la procrastinación académica y el bienestar subjetivo son variables importantes para comprender la satisfacción con el programa de postgrado, favoreciendo intervenciones que proporcionen una mejor adaptación al contexto de postgrado.

Palabras clave: satisfacción con la vida, procrastinación, bienestar, postgraduados

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After completing an academic course, many university students choose to continue their studies in *stricto sensu* postgraduate programmes (master's and doctorate). However, in recent years, there has been greater discussion about and concern for the well-being of these students, as this period of transition from higher education to the job market and the search for further training involves several changes in academic, emotional and social areas (Conley, Kirsch, Dickson, & Bryant, 2014). In this sense, in addition to external factors, intrinsic elements can influence the reduction in the subjective well-being of graduate students and, in turn, their satisfaction with their chosen postgraduate programme (McCloskey, 2011).

This research sought to identify which factors were related to satisfaction with the graduate programme. This phenomenon can be defined as the positive cognitive assessment of the experiences surrounding postgraduate programmes (Celik & Storme, 2017). Information about the positive perception of students about *stricto sensu* courses is scarce in the literature, though there is a similar study by Lizote, Verdinelli and Lana (2011) that assessed the level of satisfaction of students in *lato sensu* graduate courses [comprise specialization programmes that include courses designated as MBA (Master's in Business Administration) programs] based on

the model proposed by Paswan and Young (2002). The model, formed by five dimensions (*involvement with the teacher, student interest, teacher-student interaction, demands and organization of the course*, using structural equation modelling), demonstrated that *teacher involvement* and *student interest* are determinants of general satisfaction for *lato sensu* postgraduate courses, thus providing indicators for this topic.

In spite of this, psychological factors involved in the relationship established between the student and his or her graduate programme need to be better explored in order to broaden the understanding of the topic and enable greater activities and tasks that enable the adaptation of and improvement in postgraduate students' experiences in this academic stage. One possible dimension in this relationship is academic procrastination, which was conceptualized as the tendency to delay academic tasks to the point of generating anxiety to the detriment of those tasks (Rothblum, Solomon, & Murakami, 1986). Thus, delaying academic activities can increase the risk of psychological discomfort (Beiter et al., 2015), that is, it can increase the levels of anxiety and stress, given the time pressure at the end of the task (Glick, Millstein, & Orsillo, 2014).

From this perspective, studies have demonstrated the negative impact that academic procrastination provides on subjective well-being (Balkis, 2013; Habelrih & Hicks, 2015). In other words, the academics who procrastinate the most tend to present themselves with a lower indicator of subjective well-being and less satisfaction with academic life (Balkis & Duru, 2016; Grunschel, Schwinger, Steinmayr, & Fries, 2016). Thus, subjective well-being is an important component in the aspect of overall health (Diener, Oishi, & Lucas, 2015) and is therefore an important indicator of the level of adaptation of the students and hence their satisfaction with their experiences in the context of graduate school.

Considering the academic life of graduate students in regard to subjective well-being constructs and satisfaction with post-graduate programmes in the presence of academic procrastination, we identify a likely correlation between satisfaction and procrastination as seen in the graduation context (Balkis & Duru, 2016). Thus, understanding variables related to satisfaction with programmes and to subjective well-being, such as academic procrastination, is fundamental for health promotion and, consequently, the reduction of disorders or diseases so as to provide better adaptation to the postgraduate context.

Therefore, the present study has the general objective of evaluating the explanatory role of academic procrastination and subjective well-being in student satisfaction with graduate programmes. To this end, the study initially examines academic procrastination and subjective well-being, considering their respective definitions and correlates. This is followed by an overview of studies on the relationship between satisfaction with graduate programmes, procrastination and subjective well-being.

Academic Procrastination

Procrastination is a common practice (Yockey, 2016) that is defined as the act of postponing the performance of activities either deliberately or inadvertently (Kim, Fernandez, & Terrier, 2017). Research has been devoted to studying the different connotations that procrastination may have, and currently focuses on functional aspects (e.g., seeking to develop tasks in the best possible way; Chu & Choi, 2005; Schraw, Wadkins, & Olafson, 2007) and sometimes on non-functional aspects (e.g., difficulty in completing tasks due to a high degree of demand; Abramowski, 2018; Yang, Asbury, & Griffiths, 2018). In the academic context, the influence of procrastination appears more pronounced; for example, Balkis and Duru (2016) state that 80-90% of college students postpone their academic duties, and the phenomenon of students classified as procrastinators tending to have lower performance than "non-procrastinating" students is growing (Closson & Boutilier, 2017).

According to Steel and Klingsieck (2016), academic procrastination is restricted to tasks and activities related and/or relevant to learning and study, with interchangeable terms, such as “student procrastination” being identified in the literature. According to Balkis (2013), academic procrastination is dynamic and relates to personal, environmental and behavioural characteristics. In addition, its occurrence has been related to very extensive curricular grades, a reduction in the state of well-being, and high levels of stress, presenting itself as a negative predictor of academic achievement and subjective well-being (McCloskey, 2011; Steel & Klingsieck, 2016; Yang et al., 2018).

The act of procrastinating is also related to the performance of activities that are less liked. Students who find themselves in complex situations in starting a costly task prefer to leave that task and dedicate themselves to another, sometimes less important one (Steel & Klingsieck, 2016). As for the consequences of academic procrastination, the reduction in satisfaction with the academic context and subjective well-being is commonly mentioned (Morris & Fritz, 2015; Steel & Klingsieck, 2016).

Specifically, Balkis and Duru (2017) identify that academic procrastination is negatively related to satisfaction with academic life and that the gender variable is important in the relationship between the two, since men had a higher level of academic procrastination and a lower degree of satisfaction with academic life, in addition to observing and moderating the gender variable in the relationship between procrastination, performance and satisfaction with academic life.

Thus, it is considered that if a student is more satisfied with, for example, his or her studies, course or postgraduate programme, he or she is more likely to fulfil his or her goals and tasks on time, increasing the feeling of well-being and probably reducing the act of academic procrastination. In this way, empirically verifying the correlates of academic procrastination favours the understanding and expansion of the possibilities for intervening in this context (Häfner, Oberst, & Stock, 2014).

Subjective well-being

Subjective well-being (SWB) is a broad and comprehensive term that refers to the different ways of evaluating life or emotional experiences, referring to the degree to which a person believes or feels that his or her life is going well (Diener, Seligman, Choi, & Oishi, 2018). Research in this area covers the understanding of how people evolve in life, involving both the present period and long periods into the future (e.g., weeks, months, years); emotional reactions, such as people’s judgements in the affective dimensions (Diener et al., 2015); and people’s satisfaction with life, which can cover the overall level or specific areas, including the academic sphere (Balkis, 2013).

It is important to note that despite the confusion in the terminology, subjective well-being is not equivalent to the concept of happiness, as the latter “is a loose term with many meanings and, therefore, is often avoided in scientific literature” (Diener et al., 2017, p.87). In contrast, the term subjective well-being refers to the different forms of evolution of the assessments that individuals make about their personal experiences in life, such as positive affects, negative affects and satisfaction with life (Diener, 2013).

In this sense, subjective well-being is understood as the assessment and judgement made on an individual’s life and is a three-dimensional construct constituted by the cognitive factor and measured by means of life satisfaction and affective factors that involve emotional reactions to the events of life and the ability to equip themselves with positive and negative affects (Diener et al., 2015; Scorsolini-Comin, Fontaine, Barroso, & Santos, 2016). In the state of well-being, positive emotional experiences, such as happiness and joy, are more frequent than negative experiences, such as anger, shame, depression and anxiety, and show satisfaction with

life as a whole or within specific areas (Scorsolini-Comin et al., 2016), including in the academic context. Thus, SWB does not mean the absence of negative affects but rather a high level of positive judgement in relation to life, in addition to very positive affects.

Researchers have devoted attention to the relationship between SWB indicators and school variables, such as research that identified a correlation between higher levels of SWB and higher levels of academic performance, mental health, and general satisfaction with different aspects of life (Dela Coleta, Lopes, & Dela Coleta 2012), including satisfaction with academic life. The last aspect is negatively correlated with the dimension of SWB relative to negative affects (Balkis & Duru, 2016), since those who found pleasure and satisfaction with their academic activities tended to feel more positive SWB indicators (e.g., positive affects, satisfaction with life) in addition to improved performance (Bailey & Phillips, 2016). These elements reinforce the hypothesis formulated in this research that SWB will be related to students' satisfaction with their respective graduate programmes.

According to Faro (2013), the management of stressful situations through the coping process translates as a mediator of the perception of SWB. The coping process can be understood from regulatory behaviour attitudes, which involve the way people direct and mobilize their actions. In the context of postgraduate programmes, such behaviours can be easily noticed, given that the environment is one of constant stress and most students are unable to maintain academic productivity.

Procrastination, subjective well-being and satisfaction with graduate programmes

In view of the above, there is evidence supporting the hypothesis of the relationship between SWB and satisfaction with the graduate programme. It can be understood that such satisfaction is related to satisfaction with life (SV), which is the cognitive component of SWB. Thus, it is possible that when SWB occurs, there is also subject satisfaction in relation to a student's studies, even if that student is exposed to stressful situations; the student's perception of life remains positive. High levels of SV enable good indicators of mental and physical health, also denoting an increase in the perception of SWB (Tomomitsu, Perracini & Neri, 2014). Once the level of SWB is highlighted, it is understood that an individual identifies more positive affects, such as pleasure, joy and optimism, than negative affects, such as fear, anger and hopelessness.

In the context of postgraduate studies (master's and doctorate programmes), the subject remains involved in academic activities for long periods. It is possible to determine, then, that satisfaction with life and one's graduate school itself is intrinsically related to procrastinatory behaviour, since the student has to comply with requirements arising from the institution, such as producing text, meeting deadlines and attending classes. Failure to comply with the rules, that is, procrastinating, may have adverse consequences for the student when it causes the non-completion of activities (e.g., loss of funding, low grades and loss of vacancy).

In this same scenario, SWB is also influenced, since the postponement of the beginning or completion of a task can temporarily remove negative affects, such as hopelessness, anger and frustration. However, as the day of a test or activity approaches, for example, those same emotions are more likely to be felt, reducing the positive assessment that the student makes of his or her life as a whole and the environment where this demand originates (the postgraduate programme).

In summary, although research that evaluates these themes separately can be identified, an integrated analysis of these dimensions considering the context of graduate studies is scarce, and such an analysis is fundamental for providing beneficial information on the nature of the relationship of these constructs. In light of this, the current research aims to evaluate the

explanatory role of academic procrastination and subjective well-being in the satisfaction of students with their graduate programme.

Method

Participants

The participants were 263 Brazilian students from graduate programmes with an average age of 29 years (ranging from 21 to 59 years; $SD = 6.48$), the majority of whom were men (67.3%), single (60.1%), without children (79.5%), and in a master's degree programme (58%) and who dedicated approximately 4 hours a day to studying ($SD = 3.49$), except for the period when they are in their postgraduate classes. A non-probabilistic convenience sample was used.

Instruments

Participants answered a set of questions about themselves (gender, age, postgraduate level, marital status, whether they have children and time dedicated to studying) and the following measures:

- *Academic Procrastination Scale (APS)*. This measure was originally developed by Mccloskey (2011) and was adapted for the present study with the aim of assessing the students habits and routines through their responses to 25 items (e.g., *Tests were made to be studied for the day before; I delay my projects until the last minute*) answered on a five-point scale: 1 (*strongly disagree*) to 5 (*strongly agree*). The results identified in this adapted version show evidence of psychometric adequacy in terms of validity (univariate) and the Cronbach's alpha = 0.84.

- *Academic Major Satisfaction Scale (AMSS)*. Originally designed by Nauta (2007) for measuring satisfaction with graduate programs, this scale was adapted for this research with the aim of assessing the overall satisfaction of students with their postgraduate programmes (e.g., *I would like to be happier with my choice of postgraduate programme*). The scale consists of six items answered on a five-point scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Nauta (2007) identified satisfactory internal consistency (Cronbach's alpha = 0.95), which was also verified in the present study (Cronbach's alpha = 0.87).

- *Life Satisfaction Scale (LSS)*. Prepared by Diener, Emmons, Larsen and Griffin (1985) and adapted to this context by Gouveia, Milfont, Fonseca and Coelho (2009), this measure consists of five items and is intended to evaluate the judgement that people have about how satisfied they are with their lives (e.g., *The conditions of my life are excellent; I am satisfied with my life*). The seven-point scale ranges from 1 (*strongly disagree*) to 7 (*strongly agree*). The consistency of this measure in this study was adequate (Cronbach's alpha = 0.88).

- *Scale of Positive and Negative Affects (EAPN-10)*. This measure was originally proposed by Diener and Emmons (1984) and was adapted to the Brazilian context by Gouveia et al. (2019). It measures the valence of affections by the participant noting their emotional experiences in days preceding the study. This scale consists of ten adjectives, five positive (e.g., *happy, happy, satisfied*) and five negative (e.g., *depressed, worried, frustrated*). The internal consistency of the scale for this study was satisfactory (Cronbach's alpha = 0.82 positive emotions; Cronbach's alpha = 0.81 negative emotions). The items are answered on a seven-point scale, with the extremes being 1 = *Nothing* and 7 = *Extremely*.

Procedure

The data were collected through an online questionnaire published on social networks following the snowball procedure. In this study, the researchers shared the link for the questionnaire with their contacts in different social networks aimed at students and graduate programmes (e.g., Facebook and Twitter) reinforcing on the home page that the research was aimed at graduate students (in master's degree and doctorate programs). It is noteworthy that prior to participating in the research, the participants encountered and received a free and informed consent form (IC) that was approved by a research ethics committee (CAAE: 79972517.8.0000.0021) and contained information about the anonymous and voluntary nature of the participation and the ability for participants to decline to participate at any time without incurring any burden for the volunteers. On average, the participants took 15 minutes to answer the questionnaire.

Data analysis

For tabulation and data analysis, the statistical packages PASW and AMOS (version 18) were used. PASW was used to calculate descriptive statistics (mean, standard deviation and frequency) and inferential statistics: correlation r of *Pearson* to estimate the direction and strength of the relationship between variables; multiple regression (*stepwise* method) to understand the predictive power of academic procrastination and subjective well-being in saturation with a graduate programme; and MANOVA to verify differences in the mean of the variables under study according to gender and postgraduate level. Exploratory analyses of the data were carried out to assess the occurrence of missing cases and outliers, though no such situations were identified. To evaluate the normality of the data, the *Kolmogorov-Smirnov* Normality test was performed, the results of which (see Table 1) identified the absence of normality in most variables (except positive and negative affects) but the prevalence of satisfactory values in the symmetry indicators (less than 3) and kurtosis (less than 8-10) (Marôco, 2014). However, to see virtue of the sample size (greater than 25-30) and based on the central limit theorem, it can be seen that the distribution of the sample mean of this research presents a reasonable dimension ($N = 263$) and is close to the normal distribution (Marôco, 2014).

Table 1.

Kolmogorov-Smirnov test, skewness, kurtosis and size of the effect of satisfaction with graduate programme, academic procrastination and subjective well-being

Variables	Kolmogorov-Smirnov	Skewness	Kurtosis	p
Satisfaction with graduate programme	0.11	0.579	0.292	.001*
Academic procrastination	0.04	0.117	0.603	.054*
Subjective well-being	0.40	-0.149	11.08	.001*
Positive affects	0.06	-0.015	-0.281	.186
Negative affects	0.05	0.052	-0.384	.221
Satisfaction with life	0.06	0.107	0.614	.017*

* $p < .05$

Then, AMOS was used to test the explanatory model (*path analysis*). At the time, the covariance matrix was considered by adopting the *maximum likelihood* (ML) estimator and the following indicators: χ^2 / gl ($2 \geq 5$); *GFI*, *AGFI*, *CFI* (≥ 0.90) and *RMSEA* (≥ 0.10) (Hair, Black, Babin, Anderson, & Tatham, 2015).

Results

Initially, a Pearson *r* correlation analysis was carried out to determine the pattern of correlations between academic procrastination, subjective well-being and satisfaction with the graduate programme. The results are shown in Table 2 below.

Table 2.

Correlation between satisfaction with graduate programme, academic procrastination and subjective well-being

Constructs	M	SD	1	2	3	4	5
1. Academic procrastination	2.80	0.76					
2. Subjective well-being	4.29	1.18	-0.38**				
3. Positive affects	4.17	1.12	-0.23**	0.91**			
4. Negative affects	3.81	1.20	0.31**	-0.88**	-0.63**		
5. Satisfaction with life	4.32	1.31	-0.30	0.89**	0.60**	-0.49**	
6. Satisfaction with graduate education	3.74	0.91	-0.34**	0.62**	0.49**	-0.59**	0.36**

Note: * $p < .05$, ** $p < .001$ (bi-caudal test). Subjective well-being is represented by variables 2, 3 and 4.

It is observed that academic procrastination correlated more strongly and significantly, in a negative way, with satisfaction with the graduate programme ($r = -0.34$; $p < .001$), followed by satisfaction with life ($r = -0.30$; $p < .001$) and positive affect ($r = -0.23$; $p < .001$). Furthermore, it was found that only negative affects showed a positive correlation ($r = 0.31$; $p < .001$) with academic procrastination.

Subsequently, it was decided to test the extent to which satisfaction with the graduate programme is predicted by academic procrastination and subjective well-being (total score and factors). In this direction, a multiple regression analysis was carried out, considering academic procrastination and the factors of subjective well-being (positive and negative affects and satisfaction with life) as predictors of satisfaction with the graduate programme, adopting the *stepwise* estimation method, since that method minimizes the multicollinearity effect, objectively selects the variables, enhances the predictive power and is more parsimonious in the selection of the model, adapting the exploratory nature of the study (Hair, et al., 2015). The results are shown in Table 3 below.

Table 3.

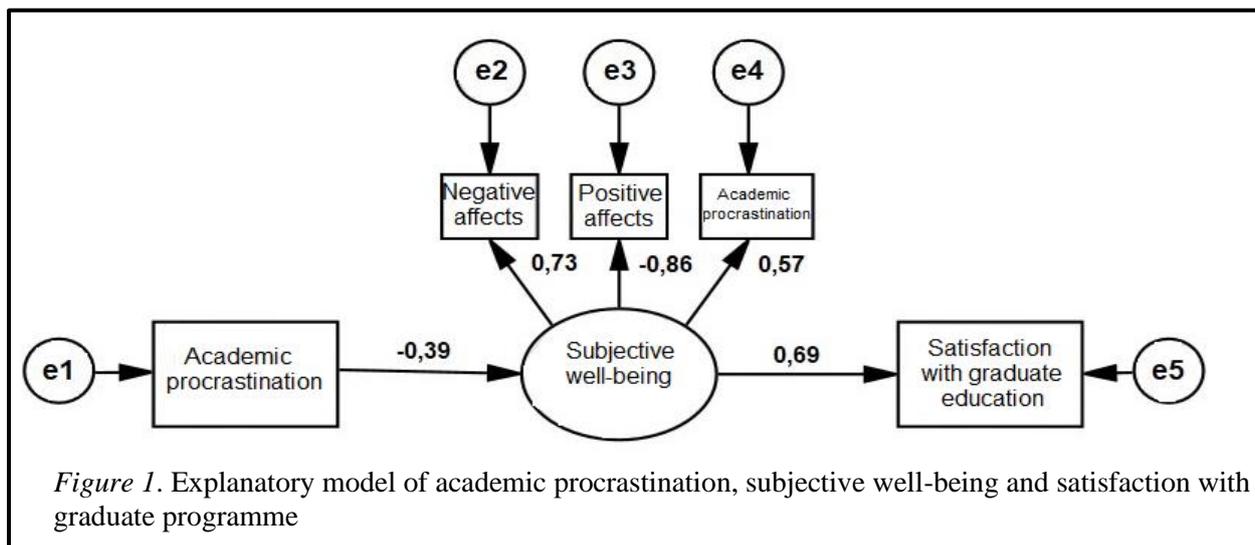
Linear regression of satisfaction with graduate programme (academic procrastination and subjective well-being as predictors)

	R	R ² adjusted	F	B	Beta	t
Negative affects	0.58	0.33	F (261) = 130.75	-0.29	-0.40	-6.50*
Positive affects	0.62	0.36	F (260) = 14.75	0.18	0.22	3.66*
Academic procrastination	0.63	0.39	F (259) = 11.98	-0.21	-0.18	-3.46*

Note. * $p < .001$; ** $p < .05$.

As noted, satisfaction with the graduate programme, that is, the overall satisfaction of academics with the programme itself, was explained satisfactorily both by academic procrastination ($\beta = -0.21, p < .001$) and by the factors of the positive ($\beta = 0.22, p < .001$) and negative ($\beta = -0.40, p < .001$) affects of subjective well-being, jointly explaining 39% of the variance (adjusted R^2). An absence of multicollinearity is identified in the model with values close to 1 ($VIF_{\text{positive affects}} = 1.68$; $VIF_{\text{negative affects}} = 1.77$; $VIF_{\text{procrastination}} = 1.11$). However, it is emphasized that satisfaction with life did not directly explain satisfaction with the graduate programme.

In addition, considering the literature, academic procrastination is considered a risk factor for subjective well-being (Grunschel et al. , 2016 Grunschel & Schopenhauer, 2015); that is, the emotional aspect decreases positive emotions and raises negative affects, while in the cognitive dimension, the reduction in satisfaction with life is identified and, consequently, low satisfaction with studies is identified. Given this finding, it was decided to test an explanatory model in which academic procrastination predicts subjective well-being, which, in turn, predicts satisfaction with the graduate programme.



In this case, the model was subjected to structural equation modelling, and the results, in general, supported the adequacy of this model: [$\chi^2(4) = 12.73, p < .01$; $c^2 / df = 3.18$, GFI = 0.98, AGFI = 0.93, CFI = 0.97 and RMSEA = 0.09 (IC90 = 0.038 to 0.150%), $p_{close} = 0.09$]. It should also be noted that all saturations (lambdas) were significantly different from zero ($\lambda \neq 0$; $z > 1.96, p < .05$). The corresponding model is shown in Figure 1.

Finally, there is a difference between pursuing a master's degree, usually the first postgraduate course, and a doctorate, and it is unknown whether gender is important factor affecting the act of procrastinating, the presence of subjective well-being and satisfaction with the postgraduate programme. For these reasons, it was decided to carry out a MANOVA with the factors of subjective well-being, academic procrastination and satisfaction with the postgraduate programme as dependent variables and gender and level in the postgraduate program (master's or PhD) as independent variables. The results indicated that no statistically significant differences were identified in the variables of gender [Wilks' Lambda = 0.99, $F(5, 255) = 0.64, p > .05, \eta^2 = 0.23$] and level in the programme [Wilks' Lambda = 0.99, $F(5, 255) = 0.69, p > .05, \eta^2 = 0.25$].

Discussion

This study aimed to assess the extent to which academic procrastination and subjective well-being relate to and allow an explanation of satisfaction with the graduate programme. It is believed that this purpose has been achieved. Commonly, studies have shown that academic procrastination reduces the indicators of subjective well-being (Grunschel et al., 2016) and, conversely, increases the level of stress and anxiety (Macher, Paechter, Papousek, & Ruggeri, 2012) in the university population. Based on this, the main findings of this study are discussed, helping to fill possible gaps regarding previous analyses of the themes with graduate students.

Academic satisfaction is understood as a subjective cognitive assessment of positive experiences at the university level (Celik & Storme, 2017). Similarly, this definition can be extended to satisfaction with the graduate programme, since the course is, in general, chosen by the individual through the identification of positive experiences within that area of study (Wiswall & Zafar, 2014). Individuals who are more satisfied with their academic field demonstrate higher levels of satisfaction with family, friends and university (Balkis, 2013). On the other hand, people with a low level of academic satisfaction face social isolation and difficulties with classmates (Wilkins-Yel, Roach, Tracey, & Yel 2018), in addition to symptoms of stress and anxiety (Beiter et al., 2015). Therefore, the results of this study were in the expected direction, indicating the knowledge of a variable that is negatively related to satisfaction with graduate education: academic procrastination.

From this perspective, as the understanding of academic procrastination refers to the tendency to postpone activities and behaviours related to the university (McCloskey, 2011), research has verified the consequences of this practice. Commonly, academic procrastination involves delaying the completion of tasks, projects and activities so that the race against time becomes harmful to the individual, causing high levels of psychological malaise (Beiter et al., 2015; Macher et al., 2012). Thus, academic procrastination reduces the level of subjective well-being (Habelrih & Hicks, 2015) and affects other areas of life, such as social relationships (McCloskey, 2011), the level of academic achievement (Balkis, 2013) and, as demonstrated in this study, satisfaction with postgraduate studies.

The findings of the relationship between satisfaction with graduate education, the dimensions of subjective well-being, and academic procrastination were specified. The three factors, together with subjective well-being, explained positive (positive affect and life satisfaction) and negative mindsets (negative affect) and satisfaction with the graduate programme, while academic procrastination had the inverse effect. Although satisfaction with life did not directly explain satisfaction with graduate studies, it was decided to keep this component in the explanatory model, since it is part of BES.

These data suggest that a satisfactory assessment in relation to life and the frequency of positive feelings (e.g., happiness, joy, optimism) predict satisfaction with graduate studies. In contrast, people who delay the completion of academic activities tend to have negative symptoms (e.g., tension, concern, frustration), given the time pressure to complete tasks (Balkis & Duro, 2016; Faro, 2013).

Regarding the results on the difference between women and men in academic procrastination, it was found that the genders did not differ in their averages. In this regard, there is inconsistency in the literature on the difference between the genders in academic procrastination (Özer, Demir, & Ferrari, 2009). Research has found that women have a higher level of academic procrastination (Doyle & Paludi, 1998; Kutlesa, 1998), while other studies have demonstrated the prevalence of this construct in men (Balkis & Duru, 2017; Özer et al., 2009). However, the findings of this study corroborate those found by Ferrari (2001) and Watson (2001). As for the difference between the master's and doctorate levels, it appears that these

behaviours are independent of the academic degree, and this result is similar to the findings of the study conducted by Özer et al. (2009) who also did not identify any difference in terms of academic degree (this research classified participants as freshman if they had completed fewer than two years of graduate courses). Therefore, it is evident that academic procrastination is a common practice among students, regardless of the academic level, that is, regardless of whether they are in the first period of graduate school or in the last year of their doctorate.

The findings reinforce the idea that satisfaction with the graduate programme is closely related to the experience of subjective well-being and the way students (whether men, women, master's students or doctoral students) perform their activities. Thus, it is evident that there is a need to broaden our perspective to include not only structural and relational elements (Lizote, Verdinelli, & Lana, 2011) in postgraduate programmes but also an analysis of psychological elements (affective, cognitive and behavioural) to enable higher levels of student satisfaction with these contexts and, consequently, gain better results regarding the development of activities and the learning process itself.

Conclusion

In view of the foregoing, the first findings of the negative impact that academic procrastination has on subjective well-being and, consequently, on satisfaction with the graduate programme in the Brazilian context are identified. However, as with any scientific endeavour, some limitations are identified, such as the fact that in focusing on individual variables, dissatisfaction with graduate education should not be reduced to academic procrastination or BES; therefore, other possible predictive elements need to be investigated, including those of a personal nature (e.g., social skills, human values, personality traits) and those of a social nature (e.g., relationship with the supervisor, financial situation, other activity besides graduate school, family and peer relationships). Such efforts should aim to expand the variables previously analysed by other authors (Lizote et al., 2011) and to aggregate information that enables the expansion of constructs related to the theme without aiming to end discussions on the theme presented only in the current findings.

Another limitation in this study was the design that was adopted, since it does not allow statements of cause and effect (Pereira, Sindic, & Camino, 2013), thus limiting the ability to ensure that people who procrastinate in academic activities will necessarily present a low reduction in subjective well-being; thus, future studies should replicate these results using the experimental method (Pereira et al., 2013) by, for example, comparing groups of graduate students evaluated as procrastinators and non-procrastinators and their scores on variables that assess subjective well-being, which would help expand the analysis for comparison due to the nature of the academic degree (master/doctorate).

Therefore, this study indicated how academic procrastination and subjective well-being are related to satisfaction with graduate programmes. Mainly, research should focus on means that make it possible to increase subjective well-being and satisfaction with one's graduate programme, since this phenomenon has practical value in people's lives (Maddux, 2018). For example, research could lead to the creation of groups or reception centres for academics newly entered into the context of postgraduate studies with the purpose of presenting the academic and personal demands required in this context in a humanized way. The purpose of this would be that the expansion of knowledge favours the reduction of procrastinating habits inherent in activities hitherto unknown and, therefore, promotes subjective well-being and satisfaction with the programme. Individuals with greater subjective well-being and satisfaction with the study context are successful in different areas in life; that is, they are more social, altruistic and active, and they like themselves and others better, have better skills in conflict resolution, have greater creative thinking and experience greater physical health and longevity (Diener et al. 2017).

Thus, the understanding of these constructs is presented as a protective factor, since highlighting specific psychological aspects as part of the process of acquiring satisfaction with the postgraduate programme allows the expansion of the debate about how certain behaviours, such as procrastinating in academic activities and experiencing affective and cognitive dimensions (subjective well-being), can influence the meaning that academics attribute to their activities in their respective programmes.

The findings of this research allow us to expand the discussions on the criteria generally used to analyse the aspects that make a graduate programme more attractive to its members, since most of the evaluations focus only on structural and technical aspects (e.g., physical structure, quality of the teaching staff, theoretical and technical support), minimizing the importance of individual and behavioural aspects unique to each graduate student, which, if properly managed (e.g., provision of care and pedagogical and psychological guidance for newly arrived academics), can favour the adaptation to and proper insertion in the academic routine and, consequently, lead to higher levels of satisfaction with the graduate programme.

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