THEMATIC SECTION:
ART EXPRESSIONS
AND CONTEMPORARY
SUBJECTIVITIES

Experiences in Graduate Studies, Behavior in Social Networks and Well-Being

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ABSTRACT – Experiences in Graduate Studies, Behavior in Social Networks and Well-Being. The aim of the study is to analyze the relationship between satisfaction in the graduate course and the externalized behavior in social networks mediated by subjective well-being. The study involves 1,173 students from *stricto sensu* courses. The evidence found confirms the relationship, especially when it refers to interpersonal relationships. Thus, satisfaction with graduate studies exceeds the limits of professional training and established social ties interfere with the well-being of students, which is externalized in social networks. The information-sharing environment gains a new space, characterized by social networks which can be used to maximize levels of academic well-being.
Keywords: **Well-being. Behavior in Social Networks. Graduate Experience.**

RESUMO – Experiências na Pós-Graduação, Comportamento nas Redes Sociais e Bem-Estar. O objetivo do estudo consiste em analisar a relação entre a satisfação na pós-graduação e o comportamento exteriorizado nas redes sociais, mediado pelo bem-estar subjetivo. O estudo envolve 1.173 alunos de cursos *stricto sensu*. As evidências encontradas confirmam a relação, em especial quando esta se refere as relações interpessoais. Assim, a satisfação com a pós-graduação ultrapassa os limites da formação profissional e os laços sociais estabelecidos interferem no bem-estar dos alunos, o qual é exteriorizado nas redes sociais. O ambiente de compartilhamento de informações ganha um novo espaço caracterizado pelas redes sociais, que podem ser utilizadas para maximizar os níveis de bem-estar acadêmico.
Palavras-chave: **Bem-Estar. Comportamento nas Redes Sociais. Experiência na Pós-Graduação.**

Introduction

Stricto sensu graduate education is characterized by multiple responsibilities that intertwine with family and financial aspects, sometimes derived from social and demographic changes (Hyun; Quinn; Madon; Lustig, 2006). As a result, responsibilities expose graduate students to pressures to meet deadlines, scientific publications, career uncertainties, stress, competitiveness, and interpersonal problems, requiring academic self-motivation to overcome vulnerabilities (Hyun et al., 2006; University of California, 2014; Cowie; Nealis; Sherry; Hewitt; Flett, 2018). This scenario is worrisome as exposure to these factors reflects on students' academic development and health (Saklofske; Austin; Mastoras; Beaton; Osborne, 2012).

Recent studies and the media have reported that anxiety, burnout syndrome¸ depression, overload and emotional exhaustion contribute to psychological changes (Hyun et al., 2006; University of California, 2014; Kulikowski; Damaziak, 2017; Levecque; Anseel; De Beuckelaer; Van der Heyden; Gisle, 2017). Concerns about graduate students' psychological health and well-being have surpassed the university walls and have gained prominence in the major media (The Guardian, 2014; Business Insider UK, 2017; Folha de São Paulo, 2017a; G1, 2017; The Guardian, 2017). The consequences of this process can compromise everything in academic performance (Hyun et al., 2006; Kulikowski; Damaziak, 2017; Levecque et al., 2017) to extreme cases, such as recent suicides in Brazil, the United States, and India (Folha de São Paul, 2017b; Hindustan Times, 2017; The State, 2017; WLTX, 2017).

Addressing issues related to graduate students' experiences in *stricto sensu* and their well-being is important due to their ability to relate to student behavior and performance (Saklofske et al., 2012). In the conceptual context, well-being has been approached from two perspectives: objective and subjective. The first consists in measures that are independent of the individual and usually refer to life quality metrics. The second comprises affective and cognitive assessments that individuals make about their own lives, using personal criteria and values (Diener, 2000). The subjective perspective is the focus of this research, since the interest of the investigation hangs on the behavior of the *stricto sensu* graduate students and their relationship with the internal and external environment.

The conceptual precepts of subjective well-being indicate that its manifestation will take place from the experiences and situations to which the subject is exposed, whether pleasant or unpleasant (Diener, 2000; Gasper, 2005; Rosin; Zanon; Teixeira, 2014). Thus, low levels of subjective well-being have among their precedents the maladjustment of the individual with the environment in which he/she is inserted (Stubb; Pyhältö; Lonka, 2011; Levecque et al., 2017).

Empirical evidence (Levecque et al., 2017; Kulikowski; Damaziak, 2017) points out that satisfaction with the formal structure of a *stricto*

sensu program in terms of infrastructure, social support, requirements, and personal aspects is associated to the possibility of completing the course and contributes to the graduate students' well-being levels. At this juncture, academic space has been described in literature as lonely due to physical, social distancing and the plurality of research topics developed along the students' trajectory. In addition, factors related to hours of extra-class dedication in research laboratories for data collection, information analysis, and reading modify social relationships and may contribute to the graduate students social and professional isolation (Hyun et al., 2006; Reeve; Partridge, 2017). Consequently, such factors interfere with the perception of subjective well-being.

To compensate for the feeling of subjective well-being, students are looking for new forms of social relationships, including ways to reframe this moment in their lives. New media is constantly being used as mechanisms to tackle physical isolation, attenuate unpleasant psychological sensations, and act as self-motivation during graduate school (Hyun et al., 2006; Reeve; Partridge, 2017). In this context, social networks are seen as ways of approaching graduate students to exchange scientific experiences and discuss the student-professor and advisor-advisee relationship (Reeve; Partridge, 2017). Therefore, social networks create bonds that make up the subject's social capital, improving their satisfaction with personal life, self-esteem and psychological well-being (Ellison; Steinfield; Lampe, 2007; Park; Song; Lee, 2014).

Discussions about specifications, disruptions, and motivations in the postgraduate environment have attracted the attention of many contemporary researchers concerned about academic productivism and the effectiveness of the teaching-learning relationship. In this context, the study presents the following guiding question: what is the relationship between postgraduate satisfaction and externalized behavior in social networks, mediated by subjective well-being? Thus, the objective of the research is to analyze the relationship between satisfaction in the graduate level and externalized behavior in social networks, mediated by subjective well-being.

The scarcity of information about postgraduate environment, which limits the development of student policies based on empirical reports (Levecque et al., 2017), is a motivating factor for this research. The study of emotions, which includes the subjective well-being and satisfaction of graduate students, promotes a conjunction of associations and provides the opportunity to know peculiar aspects of externalized behavior in social networks, since these means are used as a form of social interaction and exposure of graduate students peculiar experiences (Saklofske et al., 2012; Reeve; Partridge, 2017). Research involving psychological aspects helps knowing new relational aspects in the academic environment, especially those about the externalization of repressed feelings in the teaching-learning process (Reeve; Partridge, 2017).

Another interesting aspect of this study refers to the innovation in methodological procedures that, as opposed to work based on sec-

ondary information or clinical perceptions, uses self-report scales that allow participants to confidentially expose their perceptions (Diener, 2000; Hyun et al., 2006). The research also differs in its breadth, in that the sample includes several Brazilian universities and master and doctorate postgraduate students.

In the study, there were 1,173 *stricto sensu* graduate participants from Brazil belonging to all areas of knowledge classified by the Coordination for the Improvement of Higher Education Personnel (CAPES) (2017). Knowledge of the evidence presented here on other fields of teaching and research, besides the field of Applied Social Sciences, can provide elements that support the development of student monitoring policies, serving as benchmarking for the enhancement and improvement of the academic and educational environment of Graduate Programs in the field of Applied Social Sciences.

Finally, the central motivation for conducting this study is that, in general, graduate students have used social networks more frequent and intensely (Reeve; Partridge, 2017), commonly to externalize their repressed feelings and emotions with the satisfaction experienced from the *stricto sensu* academic training. Such externalization of feelings has been studied, for example, in the research by Guimarães (2017), in which the results indicate advances in the analysis of feelings in texts extracted from social networks, which enables increasingly reliable and realistic results in the capture of such feelings. Manifestations refer to strong indications that there are disturbances in the teaching-learning process that deserve reflection on the affective relationship in education.

Externalized Behavior in Social Networks

Social networks are virtual media formed by community-built apps groups, interactions between people for the purpose of sharing knowledge, entertainment, expressing ideas, creating and exchanging content (Kaplan; Haenlein, 2010; Li et al., 2017). These media foster the creation of new forms of social capital and benefits from personal interactions (Ellison; Steinfield; Lampe, 2007). Based on interactions in virtual networks, users form groups, establish or reinforce bonds focused on common interests (Ellison; Steinfield; Lampe, 2007; Li et al., 2017). Externalization in social networks highlights important elements about personal or academic life, as it acts as a mechanism for self-disclosure of intimate information but at the same time imbued with social desirability (Moon, 1998, 2000; Schau; Gilly, 2003).

Reeve and Partridge (2017) state that graduate students have been using social networks more intensely to share information about their experiences in the university environment, whether related to research or personal facts. In this sense, virtual resources materialized by social networks are useful for bringing students closer and minimizing the effects of isolation. Thus, the resources provided by these tools can be employed in acculturation processes. Park, Song and Lee (2014) point

out that the use of social networks minimizes the effects of stress and maximizes psychological well-being of students in face of the need to adapt to new cultures and environments. From this finding, one can foster reflections on the social and demographic changes that graduate students can experience when entering this mode of education (Hyun et al., 2006) and how the behavior adopted in social networks is affected by perceptions and experiences at the academic environment.

Although social networks are more frequently used by graduate students when exposing facts strictly related to personal life, there is a growth in publications that also permeate academic life (Neal, 2012), and it is nebulous to establish boundaries between them. This finding is corroborated by the findings of Lupton (2014) when questioning 711 graduate students, from which 26% were postgraduate students, about the use of social networks in the academy, finding advantages provided in terms of knowledge sharing, emotional support, minimizing isolation in research, networking, and joint study development. Participants also pointed to the risk of exposure of personal and / or professional information, reckless use and incoherent posture in the virtual environment that can be detrimental to their career, as well as self-promotion, plagiarism, quality of published content and time devoted to the use of social networks. From the arguments raised it is possible to elucidate that the behavior externalized in social networks exposes traces of the graduate students' satisfaction.

Satisfaction has been conceptualized in countless ways and the term is usually shaped according to the context of the research developed. Satisfaction-related factors may be diverse and have the ability to encompass a plurality of cognitive and structural elements (Palacio; Meneses; Pérez, 2002). In this study, satisfaction represents how much an element or process meets or exceeds the expectations of graduate students (Palacio, Meneses; Pérez, 2002; Cheng; Taylor; Williams; Tong, 2016).

Thus, satisfaction can be verified by the plurality of scopes in which the *stricto sensu* is wrapped. At structural level, resources made available to students and the culture of the environments can be linked to student experiences and influence decisions such as the option to continue the course, put in standby and even quit it (Golde, 2005; Hyun et al., 2006).

In addition, programs' infrastructure design is associated to interpersonal relationships established within the postgraduate level. In interviewing 58 students who quitted American doctoral programs, Golde (2005) identified that the physical isolation caused by the division of the study environment physical structures contributed to the disengagement of students in graduate school and the decision to quit the course. Thus, it is clear that the relationships established among staff, students and professors foster an enabling environment for learning and academic engagement. The low emotional support coming from people with whom individuals live in the university, besides contribut-

ing to the dropout of the course, boost the levels of anxiety, emotional exhaustion and tension at work and, negatively, job satisfaction and well-being (Levecque et al., 2017).

Regarding the advising process, harmonious advisor-advisee coexistence is essential, since it is one of the people postgraduates have more interaction with during the course and receive directions for development of the research and other activities in the academic field (Leite Filho, 2004; Barnes; Williams; Archer, 2010).

Reports contained in the study by Barnes, Williams and Archer (2010) conducted with 564 PhD students indicate that the positive attributes valued by them in their relationship with their advisors are embodied in accessibility to personal encounters, usefulness in providing directions for the development of research, fulfilling of program protocols, socialization in the networking process, professional development and empathy in caring for student well-being. On the other hand, negative attributes are characterized by inaccessibility due to restriction of personal contact or lack of advisor answers by email and / or telephone, providing information and guidance of little use for research development or stay in the research. program, and lack of interest in the research developed and the well-being of the students.

Similarly, course and courses organization are factors that interfere with student satisfaction. Mismatches in courses, duplicity of content studied, low utility of programmed content, and strictly academic approaches negatively impact student satisfaction with postgraduate experiences (Tunes, 1981; Romero-Gutierrez; Jimenez-Liso; Martinez-Chico, 2016).

Regarding support for academic development, Romero-Gutierrez, Jimenez-Liso and Martinez-Chico (2016) through the SWOT analysis, developed in six environmental programs in Spain, identified that the interuniversity nature of postgraduate programs is an element appreciated and seen as a strong point by students. Through ties between national and / or international institutions, support for academic development can be strengthened through exchange opportunities and impact on the level of satisfaction with academic development perceived by students.

Financial support can also be mentioned as a relevant factor for the academic development and engagement of graduate students, since there are no affirmative action quotas fees or financial scholarships for all *stricto sensu* students. Hyun et al. (2006, p. 260) point out that "[...] financial confidence in the ability to graduate is a significant contributor to the emotional well-being of graduate students." The importance attributed to the financial factor by postgraduates is justified, since in many cases it is not possible to maintain employment during the master or doctorate, either by formal rules or the high workload required in the development of academic activities, besides the low levels of funding available for research (Bair; Haworth, 2001; Kulikowski; Damaziak, 2017).

In this context, satisfaction with postgraduate studies can be viewed from the structure made available to students under physical and organizational aspects, in terms of the arrangement of the courses as well as the course in general. The interpersonal relationships and the support offered to the students' academic development stand out, being conducive to the study of these elements together with the externalized behavior in social networks and the subjective well-being of the graduate students.

Design of the Research Hypothesis

Subjective well-being is sometimes linked to the concept of happiness. Its manifestation occurs from the subject's own assessment of satisfaction with his/her own life and it is either positively linked to pleasant emotions experienced or negatively to unpleasant ones. This self-assessment is linked to the subjective dimension of well-being, which is considered an appropriate measure for identifying subjective aspects, as it enables the individual to recognize how satisfied he/she is with his/her own life and how happy with his/her experiences (Diener, 2000).

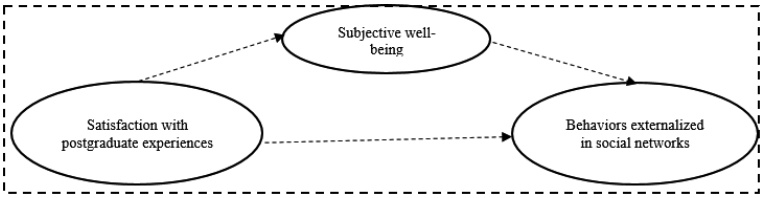
Therefore, various events and elements may be related to well-being levels. Restricting themselves to the academic realm, Stubb, Pyhältö and Lonka (2014) point out that graduate students experience a wide range of positive, learning and enthusiasm, and negative experiences, linked to stress, isolation, and workload, among others, which affect the level of well-being. Levecque et al. (2017) state that the fear of failing in the final stages of postgraduate studies and interpersonal conflicts may decrease well-being levels, but social support from harmonious coexistence networks between friends, colleagues, professors and employees maximizes student well-being.

Findings (Diener, 2000; Stubb; Pyhältö; Lonka, 2014) show that there is consensus that well-being is a result of the dynamics between the individual and the environment in which he/she is inserted. In this research, the term academic well-being, derived from the subjective dimension, indicates the level of satisfaction with academic life, positive and negative emotions experienced by graduate students.

Satisfaction with the appropriate environment tends to shape the skills, interests, and academic and social well-being of graduate students (Feldman; Smart; Ethington, 2004). From the evidence it is possible to infer that academic well-being may be related to the students' satisfaction levels in relation to the postgraduate experiences that may reflect in the behavior externalized by the subjects in social networks. Thus, the research hypothesis is stated: *the relationship between satisfaction with graduate experiences and behaviors externalized in social networks is mediated by the subjective well-being of graduate students.*

Based on the developed hypotheses, Figure 1 illustrates the theoretical model proposed in this investigation.

Figure 1 – Theoretical research model



Source: Authors' elaboration (2017).

The proposed theoretical model is in line with the discussions fostered by Hyun et al. (2006, p. 248) by pointing out that "[...] the characteristics of the graduate program are associated to the emotional well-being of students and the likelihood of completing the course". At this juncture, it is possible to verify students' satisfaction with postgraduate studies, named in this study as experiences and the relationship with subjective well-being. The mediating role of well-being is believed to provide greater freedom for self-disclosure on issues inherent to personal and / or academic life in *stricto sensu* in social networks (Moon, 1998, 2000; Schau; Gilly, 2003).

Methodology

This is a descriptive-character, quantitative-approach research and data were collected through an instrumentalized survey and published on the online platform SurveyMonkey®. The instrument was available for completion in November and December 2017. The study population consists in *stricto sensu* graduate students from different areas of knowledge classified by CAPES (2017). Dissemination of the research, which participation in was voluntary, was carried out in four ways, as follows: (i) group invitations in social networks aimed at graduate students totaling approximately 54,000 members; (ii) dissemination to fan pages focused on postgraduate social media issues, which have approximately 75,000 followers; (iii) dissemination in blogs with content aimed at graduate students; and (iv) referral to more than one thousand e-mail addresses of graduate programs in all regions of the country, requesting the coordination of the courses to disseminate the research to students.

As methodological rigor, in addition to being explicit in the invitation to participate in the research that it was intended for *stricto sensu* graduate students, some filter questions were included to allow excluding participants with a profile other than that wanted by researchers. Thus, 1,250 completed instruments were obtained, and 43 were excluded because they had incomplete answers, 21 because they were from undergraduate and specialization students and 13 because they were not linked to postgraduate programs. Therefore, the final sample is 1,173 valid instruments. The characteristics of the survey respondents are elucidated in Table 1.

Table 1 – Respondents Profile

Gender		Knowledge Field			
Female	70.247%	Exact and Earth Sciences	11.082%	Applied Social Sciences	19.096%
Male	29.753%	Biological Sciences	10.656%	Humanities	12.446%
Age		Engineering	8.354%	Interdisciplinary	3.239%
Up to 26 years	30.946%	Health Sciences	20.119%	Linguistics, Letters and Art	4.347%
From 26 - 29 years old	25.746%	**School Region**			
From 29 - 33 years old	20.461%	Midwest	3.069%	Southeast	58.312%
From 33 - 69 years old	22.847%	Northeast	6.734%	South	29.752%
Educational institution		North	1.108%	Did not declare	1.025%
Community	2.472%	**Training Level**			
Private	8.525%	Doctorate degree	48.849%	Professional Master's	2.474%
Public	89.003%	Academic Master's	47.058%	Post-doctoral	1.619%

Source: Research data.

Most respondents identify with the female gender; from south-eastern Brazil; the age group is concentrated in participants up to 26 years old; the origin of the participants is centered on public educational institutions, with a predominance of health graduate students attending doctoral level.

Data collection instrument was structured in four blocks, the first three ones representing the study first-order constructs, satisfaction with postgraduate experiences, academic well-being and externalized behavior in social networks, and the last dedicated to respondents' characterization. Metrics already tested and available in the literature were adapted for measuring these constructs. Figure 2 describes the research constructs, number of assertions corresponding to each item, the description and source that guided their elaboration.

Figure 2 – Research Constructs

Constructs		N **	Constitutive Description	References
1*	Institutional Structure	9	Physical resources available and commitment of the institution to the quality of the course.	Adapted from Schleich, Polydoro and Santos (2006)
	Course Organization	8	Organization of courses, out-of-class attendance, forms of assessment and attention of professors during classes.	
	Interpersonal Relations	4	Relationship with peers of the same level of education, staff, coordination, members of research groups, among others.	Authors (2017)
	Support for Academic Development	8	Instrumental workshops, financial incentives for research, exchange and other extracurricular activities.	Adapted from Schleich, Polydoro and Santos (2006)
2	Satisfaction with Academic Life	5	Measures how satisfied the graduate student is with academic life.	Adapted from Dinner, Emmons, Larsen and Griffin (1985)
	Positive emotions	4	Measures the manifestation of positive emotions in his/her life in recent times.	Lent, Ireland, Penn, Morris and Sappington (2017)
	Negative emotions	4	Measures the manifestation of negative emotions in his/her life in recent times.	
3	Externalized Personal Behavior	4	Posts related to satisfaction with personal life.	The authors (2017).
	Externalized Academic Behavior	5	Posts related to satisfaction with academic life.	

*Note: 1 = Satisfaction with Graduate Experiences; 2 = Subjective Academic Well-being; 3 = Externalized Behavior in Social Networks; ** N. = Number of construct statements.

Source: Authors' elaboration (2017).

Statistical data analysis was performed using R Studio® software using Structural Equation Modeling - PLS-PM (Partial Least Squares Path Modeling). The PLS-PM technique allows the analysis of networks formed by variables, as well as the quantification of connections or relationships between variables considering the network as a system of multiple interconnected linear regressions (Sanchez, 2013).

Hair Jr., Hult, Ringle and Sarstedt (2014) point out that PLS-PM enables the identification of relationships that would be hardly found by other statistical techniques in view of the treatment form and data characteristics, such as small sample size and abnormal data (Ringle; Silva; Bido, 2014). Regarding the sample size, Hair Jr. et al. (2014) recommend that it should preferably be 10 times the number of the latent variable paths receiving the largest number of predictors. Thus, for this survey, 70 is the minimum number of respondents required for this criterion.

In addition, the G* Power® software was used to determine the minimum number of respondents that would allow the use of the PLS-PM technique. By setting a median level for Effect size $f^2 = 0.15$, significance level of 1% (α err prob = 0.01), Power (1-β err prob) = 0.95, and

Numbers of predictors = 7, a minimum sample of 292 respondents was obtained. Thus, Hair Jr. et al. (2014) and Ringle, Silva and Bido (2014) recommendations were met, which enables using of PLS-PM technique with bootstrapping method.

Description and Analysis of Results

Measurement Model Evaluation

In the measurement model it is necessary to analyze the one-dimensionality of the indicators that make up the construct (Sanchez, 2013). From this verification, it is possible to identify if the assertions elaborated in the collection instrument, when analyzed together, can represent the latent variable that it proposes to measure (Hair Jr. et al., 2014).

DG Rho was used to verify the structural model internal consistency. The analysis of eigenvalues derived from indicators' correlations consists of the first eigenvalue greater than 1 and the second eigenvalue less than 1. In the analysis of these internal reliability indicators, assertions impairing the formation of the constructs were identified – Institutional Structure, with two assertions with unsatisfactory reliability values, and Support for Academic Development and Exteriorized Personal Behavior with one assertion each – being necessary to remove these assertions from the internal measurement model to meet this construct validity assumption.

After analyzing the internal consistency of the constructs, it was necessary to verify the Convergent Validity (CV) obtained from the values of the Average Variance Extracted (AVE), which indicates how much of the indicators' variation were considered in the formation of the latent variable (Sanchez, 2013). Therefore, Fornell and Larcker (1981) criterion was adopted, in which values above 0.50 (AVE> 0.50) (Ringle; Silva; Bido, 2014) are considered satisfactory. Table 2 shows the Pearson correlations between constructs and the internal reliability and CV measures.

Table 2 – Correlation between Constructs and Measurement Model – Internal Consistency and Convergent Validity

* Variables	1	2	3	4	5	6	7	8	9
1	1.000								
2	**0.575**	1.000							
3	0.421	**0.588**	1.000						
4	0.597	**0.624**	0.569	1.000					
5	0.372	0.491	0.425	0.434	1.000				
6	0.152	0.216	0.229	0.211	0.394	1.000			
7	-0.142	-0.216	-0.183	-0.177	**-0.329**	-0.027	1.000		
8	0.121	0.169	0.178	0.122	0.188	0.171	**-0.274**	1.000	
9	0.205	0.284	0.257	0.278	**0.550**	**0.757**	-0.118	0.181	1.000
DG. Rho > **0.70**	0.896	0.926	0.824	0.876	0.925	0.958	0.927	0.727	0.962
1st Eigenvalue > 1.00	3.87	4.88	2.16	3.54	3.56	3.41	3.04	1.51	4.17
2nd Eigenvalue < 1.00	0.802	0.702	0.746	0.872	0.597	0.314	0.494	0.967	0.330
AVE > **0.50**	0.545	0.610	0.538	0.503	0.712	0.851	0.755	0.480	0.834

*Note: (1) Institutional Structure; (2) Course Organization; (3) Interpersonal Relations; (4) Support for Academic Development; (5) Satisfaction with Academic Life; (6) Positive Emotions; (7) Negative Emotions; (8) Externalized Personal Behavior; (9) Externalized Academic Behavior.
Source: Research data.

Table 2 shows that satisfaction with the *Course Organization* (2) is positively associated to the *Institutional Structure* (1) (r = 0.575), *Interpersonal Relationships* (3) (r = 0.588) and *Support for Academic Development*. (4) (r = 0.624). On the other hand, *Negative Emotions* (7) inversely correlate to *Satisfaction with Academic Life* (5) (r = -0.329) and *Externalized Personal Behavior* (8) (r = -0.274).

When analyzing the AVEs, it can be noted that the construct *Externalized Personal Behavior* (8) obtained a value close to the theoretical recommendations, but below 0.50. Due to the proximity to the parameter set, we chose not to remove other assertions from the construct to avoid affecting the internal reliability of the latent variable.

Finally, the Discriminant Validity (DV) was performed in which, through Factor Loads, it is analyzed if the crossloadings of each construct are larger than the others in the same line, forming a diagonal matrix. Table 3 shows the minimum and maximum values of crossloadings and associated constructs, and the crossloadings' maximum value cannot be greater than the minimum of associated construct.

Table 3 – Measurement Model - Discriminant Validity

Discriminating Validity	1	2	3	4	5	6	7	8	9
Crossloadings (Minimal)	-0.163	-0.216	-0.152	-0.167	-0.324	-0.120	-0.370	-0.322	-0.137
Crossloadings (Max)	0.642	0.538	0.517	0.529	0.506	0.736	0.092	0.305	0.723
Associated Construct (Minimal)	0.687	0.705	0.685	0.551	0.695	0.879	0.730	0.616	0.864
Associated Construct (Max)	0.769	0.830	0.790	0.807	0.928	0.947	0.913	0.764	0.951

*Note: (1) Institutional Structure; (2) Course Organization; (3) Interpersonal Relations; (4) Support for Academic Development; (5) Satisfaction with Academic Life; (6) Positive Emotions; (7) Negative Emotions; (8) Externalized Personal Behavior; (9) Externalized Academic Behavior.
Source: Research data.

Considering that the validation parameters of the measurement model indicated in the literature were met (Henseler; Ringle; Sinkovics, 2009; Sanchez, 2013; Hair et al., 2014; Ringle; Silva; Bido, 2014), the structural model and research hypothesis analysis was performed in the sequence.

Structural Model and Research Hypothesis

The structural model and research hypothesis evaluation was simultaneously performed. To assess whether the relationship between satisfaction with postgraduate experiences and externalized behaviors in social networks is mediated by academic well-being, the three conditions proposed by Baron and Kenny (1986) were employed.

The first two conditions are to analyze whether "(A) variations in the levels of the independent variable significantly affect the variations of the presumed mediator" and "(B) variations of the (possible) mediator significantly affect the variations of the dependent variable" (Baron; Kenny, 1986, p. 1176). Thus, Table 4 presents the path coefficients and significance of the relationship between satisfaction with postgraduate experiences and academic subjective well-being.

Table 4 – Paths Evaluation - Conditions A and B

Condition	Path	Coefficient	Error	t-value	p-value	Decision
(A) Independent Variable significantly affects the possible mediating variable.	Inst. Struct. > S. Acad. L.	**0.067**	**0.032**	**0.000**	**0.000*** **	Condition Partially Met
	Inst. Struct. > Positive Em.	-0.004	0.037	0.000	0.906	
	Inst. Struct. > Negative Em.	-0.001	0.037	0.000	0.960	
	C. Org. > S. Acad. L.	**0.276**	**0.035**	**0.000**	**0.000*** **	
	C. Org. > Positive Em.	**0.089**	**0.040**	**0.000**	**0.027** **	
	C. Org. > Negative Em.	**-0.145**	**0.41**	**0.000**	**0.000*** **	
	Int. Rel. > S. Acad. L.	**0.160**	**0.032**	**0.000**	**0.000*** **	
	Int. Rel. > Positive Em.	**0.129**	**0.036**	**0.000**	**0.000*** **	
	Int. Rel. > Negative Em.	**-0.070**	**0.037**	**0.000**	**0.058***	
	S. Ac. Dev. > S. Acad. L.	**0.129**	**0.035**	**0.000**	**0.000*** **	
	S. Ac. Dev. > Positive Em.	**0.084**	**0.040**	**0.000**	**0.039** **	
	S. Ac. Dev. > Negative Em.	-0.044	0.041	0.000	0.274	
(B) The possible mediating variable affects the dependent variable.	S. Ac. L. > Ext. P. B.	**-0.012**	**0.035**	**0.000**	**0.000*** **	Condition Met
	S. Ac. L. > Ext. A. B.	**0.291**	**0.022**	**0.000**	**0.000*** **	
	Positive Em. > Ext. P. B.	**0.143**	**0.030**	**0.000**	**0.000*** **	
	Positive Em. > Ext. A. B.	**0.641**	**0.019**	**0.000**	**0.000*** **	
	Negative Em. > Ext. P. B.	**-0.025**	**0.029**	**0.000**	**0.000*** **	
	Negative Em. > Ext. A. B.	**-0.005**	**0.018**	**0.000**	**0.000*** **	

*Note: Inst. Struct. = Institutional Structure; C. Org. = Course Organization; Int. Rel. = Interpersonal Relations; S. Ac. Dev. = Support for Academic Development; S. Ac. L. = Satisfaction with Academic Life; Positive Em. = Positive Emotions; Negative Em. = Negative Emotions; Ext. P. B. = Externalized Personal Behavior; Ext. A. B. = Externalized Academic Behavior.
* p <0.10; ** p <0.05; *** p <0.01.
Source: Research data.

The analysis of path coefficients is performed based on the parameter established by Hair Jr. et al. (2014), where $\beta \cong 0.02$, $\beta \cong 0.15$ and $\beta \cong 0.35$ are considered small, medium and large effects respectively. Analyzing Table 4, it can be observed that only the relationships between institutional structure and positive emotions (β = -0.004; p-value = 0.906) and negative emotions (β = -0.001; p-value = 0.960), besides the relationship between support for academic development with negative emotions (β = -0.044; p-value = 0.274) were not significant. Thus, there is no possibility for positive emotions and negative emotions in the in-

stitutional structure dimension and also negative emotions in the support for academic development dimension to mediate the externalized behavior in social networks.

Still regarding Table 4, it appears that satisfaction with the course organization is the variable that has the greatest influence on satisfaction with academic life (β = 0.276; p-value = 0.000) and negative emotions (β = -0.145; p-value = 0.000), having large and medium effects, respectively. The variable course organization measured aspects related to the way in which the graduate course is structured in formal terms, class planning, subject evaluation methods, classroom professors' attention, extracurricular care, among others. Although recognizing the importance of the other variables of satisfaction with postgraduate experiences, it is the course organization that contains the elements impacting the routine of graduate students the most, as it is related to the courses and work developed in the student's daily life.

In the dimension *course organization,* all paths presented a significant relationship with academic well-being. The results converge with the study by Barnes, Williams and Archer (2010) regarding the importance of accessibility and attention given by professors to students, and with those by Tunes (1981) and Romero-Gutierrez, Jimenez-Liso and Martinez -Chico (2016) on the relevance of content and form when planning courses. Therefore, it would be interesting for these variables to be observed by graduate school boards as classroom experiences and formal course organization can significantly affect students' satisfaction with academic life and negative emotions. These situations added to the stress of work overload, dissatisfaction with the attention received or relevance and depth of the studied contents, as well as the feeling of injustice regarding the evaluations, may promote lower levels of academic well-being.

Positive emotions were more strongly related to the satisfaction of interpersonal relationships (β = 0.129; p-value = 0.000), with an average effect. This finding is in line with the evidence presented by Golde (2005) and Levecque et al. (2017), because the establishment of stable interpersonal relationships between subjects inserted in the postgraduate environment serves as psychological support to students, minimizing the feeling of isolation and fostering the manifestation of positive emotions.

Analyzes of the dimensions of externalized behaviors in social networks indicate the existence of large effects between externalized academic behavior and satisfaction with academic life (β = 0.291; p-value = 0.000) and positive emotions (β = 0.641; p-value = 0.000). The results indicated that graduate students tend to externalize to their social networking contacts academic-related events that make them happy and / or arise positive emotions.

Externalized personal behavior has medium direct effect with positive emotions (β = 0.143; p-value = 0.000) and low with negative emotions (β = -0.025; p-value = 0.000). The fact that negative emotions have a low relationship may result from students' self-preservation in

not exposing negative events related to their personal lives (Lupton, 2014), or when experiencing positive feelings they seek through online manifestations as a way to legitimize their personal achievements and share such facts with your friends and followers in social networks.

The last condition to be observed in mediation verification is the decrease or non-existence of significant direct effects between the independent and dependent variables with the inclusion of the presumed mediating variable (Baron; Kenny, 1986). Thus, if the inclusion of the presumed mediating variable reduces the direct effect to zero, while the significant effects remain and the conditions (A) and (B) are met, it is possible to state the existence of total mediation, otherwise multiple factors of mediation indication are indicated (Baron; Kenny, 1986), being called partial mediation in recent literature. It should be noted that the increase in direct effect with the inclusion of the presumed mediating variable does not characterize mediation. Table 5 shows the values of the structural model and the mediation assessment.

Table 5 – Structural Model and Mediation Assessment - Condition C

(C) Path	Model without Med.	Mediated Model considering Academic Performance						Mediation Acceptance
	Effect	Direct effect		Indirect effect		Total Effect	Med. effect	
	Coef.	Coef.	%	Coef.	%	Coef.	%	
Inst. Struct. > Ext. P. B.	0.041	0.030***	103.44	-0.000	-3.44	0.029	Does not exist	Rejected
Inst. Struct. > Ext. A. B.	0.000	-0.013***	-433.33	0.016	544.44	0.003		
C. Org. > Ext. P. B.	0.089**	0.047***	50.54	0.046	49.46	0.094**	+49.46	Partial
C. Org > Ext. A. B.	0.141***	0.004***	2.79	0.138	97.21	0.143**	+97.21	
Int. Rel. > Ext. P. B.	0.127***	0.089***	72.35	0.034	27.65	0.123**	+27.65	
Int. Rel. > Ext. A. B.	0.091**	-0.034***	-35.78	0.130	135.78	0.095**	+135.78	Total
S. Ac. Dev. > Ext. P. B.	-0.026*	-0.045***	187.50	0.021	-87.50	-0.024	Does not exist	Rejected
S. Ac. Dev. > Ext. A. B.	0.138***	0.039***	29.77	0.092	70.23	0.131**	+70.23	Partial

Construct	R^2 - Model without Mediation	R^2 - Mediated Model
Satisfaction with Academic Life	There is not.	0.285**
Positive emotions	There is not.	0.066**
Negative emotions	There is not.	0.052**
Externalized Personal Behavior	0.040**	0.113**
Externalized Academic Behavior	0.102**	0.647**
Goodness-of-Fit	**0.204**	**0.385**

Note: Inst. Struct. = Institutional Structure; C. Org. = Course Organization; Int. Rel. = Interpersonal Relations; S. Ac. Dev. = Support for Academic Development; Ext. P. B. = Externalized Personal Behavior; Ext. A. B. = Externalized Academic Behavior.
* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.
Source: Research data.

Table 5 shows direct effects of the regression model without the presence of the presumed mediating variable that in this research represents academic well-being, followed by the direct effects, indirect effects and total effects of the structural model with the presumed mediating variable. The path analysis proposed in the three conditions of Baron and Kenny (1986) and instrumented with the help of the bootstrapping technique (n=5000, with replacement) indicate the existence of a mediating effect of academic subjective well-being on the observed relationship. Therefore, it can be accepted the hypothesis that the relationship between satisfaction with postgraduate experiences and behaviors externalized in social networks is mediated by the subjective well-being of Brazilian graduate students.

Initially, the mediating effect was not observed in the relationship between institutional structure and externalized academic behavior ($\beta_{(\text{no mediation})} = 0.000$; $\beta_{(\text{total effect})} = -0.003$; p-value> 0.100) and externalized personal behavior ($\beta_{(\text{no mediation})} = 0.041$; $\beta_{(\text{total effect})} = 0.029$; p-value> 0.100), because there is no significance in the path coefficient of the direct model and the total coefficient of the mediating model. Despite the non-occurrence of mediation, it is important to highlight that the institutional structure can collaborate, so that the level of satisfaction with other elements of academic experiences is enhanced or minimized as the institutional structure shapes the physical environment the student attends. For example, seating and student placement in classrooms and study labs can foster student integration and provide high satisfaction with interpersonal relationships.

The conclusions from the results are relevant, while physical resources, represented by the institutional structure that universities make available to the students in the sample affect their satisfaction with academic life ($\beta = 0.067$; p-value = 0.000), but relate to their emotions. The institutional structure had small effects on the direct relationship with student behaviors in social networks. Thus, it can be inferred that the variables academic well-being and externalized behavior in social networks are affected to a greater extent by other factors linked to routine activities, support provided to students and interpersonal relationships than purely by institutional structure.

The relation between course organization and personal behavior externalized in social networks was partially mediated by academic well-being (Mediation = 49.46%), and in the academic behavior dimension there is almost total mediation (Mediation = 97.21%). The findings corroborate the propositions of Barnes, Williams and Archer (2010), Kulikowski, and Damaziak (2017) and Levecque et al. (2017), since everyday elements affect students' academic well-being and this partially mediates the behavior adopted in social networks, with greater intensity for subjects related to university life. This result is justified as the satisfaction with the form of course organization, in terms of learning level, can be related to the perception of usefulness and assertive choice about the decision to go to graduate school. Failure to meet the expectations of the course can generate dissatisfactions that are externalized through the attitude adopted in social networks.

Additionally, the presence of partial mediation of academic well-being in the relationship between satisfaction with interpersonal relationships and externalized behavior in social networks in the personal behavior dimension (Mediation = 27.65%), and total for academic behavior (Mediation = 135, 78%) exposes the importance of the supportive and cooperative climate among students, staff and professors. Thus, it was observed that academic well-being was influenced by satisfaction with such relationships and the externalized behavior in social networks is a way to identify how postgraduates perceive the quality of relationships established in the academic context.

Thus, these results illustrate that the coordination centers of graduate courses sometimes play a driving role in the trajectory of the graduate student, that is, in the experience he/she will have within the graduate program. Sometimes this experience can culminate in the development of qualified professionals who are satisfied with the training received, given that the structure at which they were inserted was satisfactory. In contrast, the result of this process can be a frustrated practitioner immersed in emotional exhaustion and stress, which brings concern to *stricto sensu* programs.

Moreover, the discussions presented by Moon (1998, 2000) and Schau and Gilly (2003) emphasize the relevance of observing users' behavior in social networks, because in this environment there are several interactions and there is a possibility of higher levels of self-disclosure of information about students' experiences, with notes of what they feel and evaluate in terms of satisfaction with postgraduate experiences.

Support for student development has a high capacity to significantly relate to satisfaction with academic life and positive emotions, which partially mediate the relationship with behavior externalized in social networks in the academic dimension (Mediation = 70.23%), confirming the importance of student support and resources to foster their well-being and satisfaction with the university (Hyun et al., 2006). The importance of student incentives is also noted in data from the University of California (2014), where living conditions and student financial support are important predictors of postgraduate level of life satisfaction and depression.

In summary, this research findings indicate that it is relevant to consider academic well-being in the behavior of postgraduate students, a fact evidenced in the comparison of Goodness-of-Fit of the direct model (GoF = 0.204; p-value <0.05) with the mediating model (GoF = 0.385; p-value <0.05). The consideration of the subjective well-being of graduate students is timely as it is a construct linked to academic performance, university engagement, permanence in the course and psychological changes, exposing the need for constant deepening and advances in studies inherent to the subject (Hyun et al., 2006; University of California, 2014; Kulikowski; Damaziak, 2017; Levecque et al., 2017; Cowie; Nealis, Sherry; Hewitt; Flett, 2018).

Conclusions

Discussions arising from this research findings indicate that contentment with interpersonal relationships in the postgraduate level is related to the level of academic well-being. In this sense, postgraduate satisfaction exceeds the limits of content and vocational training, and the social ties established in this environment interfere with the well-being of students and their behavior in social networks. Actions that promote the integration and presence of a collaborative environment among professors, staff and graduate students are recommended so that academic well-being and satisfaction with postgraduate experiences are maximized.

Similarly, the paths between course organization and externalized behavior showed high levels of mediation by academic well-being. Thus, when observing the posture of students in social networks, regarding negative publications concerning postgraduate studies, it is important to identify the level of satisfaction with the way the course is structured, as the quality of the contents taught, attention and professors' didactics are strong predictors of this behavior.

The relationship between student development support and externalized academic behavior had a mediating effect when considering academic well-being. In this sense, the opportunities offered to students, as well as the financial resources available, are essential for positive perceptions about graduate studies and for this to be manifested in the virtual environment through their publications. Financial insecurity is justified because it is one of the main elements that can compromise the end of the course, and it is necessary to maintain the sources of support and student development during the postgraduate course.

The fact that there is no mediating effect of academic well-being on the relationship between the dimension of satisfaction with the course structure and behavior externalized in social networks indicates the need for analyzing results carefully, as the course structure may be related to other dimensions of the postgraduate environment and impact on satisfaction with the experiences of *stricto sensu*. In response to this result, it is expected that studies can refute or present new directions for this relationship.

The use of virtual tools has increased every year, and social groups are created in these places to share personal, academic and professional experiences and information. Strictly speaking, postgraduate publications on social networks may highlight information that would be difficult to obtain in other ways. Self-disclosure may be maximized in social networks by the sense of freedom of communication provided, while in the postgraduate environment opinions may be narrowed and repressed, limiting the identification of evidence useful to the postgraduate improvement process.

It is believed that the information for improving the quality of postgraduate courses and students' levels of subjective academic well-being may come from observing publications on social networks. It is

not expected through this investigation to exhaust the possibilities of studies on the subject, but to highlight the importance of observing the satisfaction of students with postgraduate experiences and academic well-being, as well as how these constructs affect behavior on social networks and can provide elements to be discussed in the educational field.

The limitations of the study consist of aspects that can be improved in future research. The restricted approach to quantitative techniques may be combined in the future with qualitative methods. Further study of each dimension of postgraduate experiences are also opportunities to be explored.

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