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Reasons for droppingout and learning motivation in higher education

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Abstract

This study aimed to research the motives for academic dropout and learning motivation (achievement goals and intrapersonal causal attributions) of 335 students from a private Brazilian university. The correlations between these constructs, including the age variable, were small and medium magnitude. Motivation to learn, first-course option, and intention to drop out accounted for 46% of the explained variance of the motives for dropout in the social dimension and 38% in the financial and academic dimensions. We identified statistically significant differences in the three constructs regarding the students' gender, the intention to drop out, and course. The results indicate that the reasons for academic dropout vary according to the interaction between motivational, personal and contextual characteristics. This study supports the continuity of research on the subject and actions to prevent academic dropout, especially in private institutions.
Keywords: academic dropout; achievement goals; intrapersonal causal attributions.

Resumo

Motivos para a evasão e a motivação para aprendizagem no ensino superior. O objetivo deste estudo foi investigar os motivos para evasão acadêmica e a motivação para aprendizagem (metas de realização e as atribuições de causalidade intrapessoais) de 335 estudantes de uma universidade particular brasileira. As correlações entre os construtos, incluindo a variável idade, foram de pequena a moderada magnitude. A motivação para aprendizagem, a opção de curso e a intenção de abandono representaram 46% da variância explicada dos motivos para a evasão na dimensão social e 38% das dimensões financeira e acadêmica. Identificaram-se diferenças estatisticamente significativas nos três construtos quanto ao sexo, à intenção de abandono e o curso. Os resultados indicam que os motivos para evasão variam conforme a interação entre as características motivacionais, pessoais e contextuais. Este estudo fundamenta a continuidade de pesquisas sobre a temática, bem como ações destinadas à prevenção da evasão acadêmica, sobretudo nas instituições particulares.
Palavras-chave: abandono acadêmico; metas de realização; atribuições de causalidade intrapessoais.

Resumen

Motivos de deserción y motivación para aprender en la Educación superior. Este estudio tuvo como objetivo investigar los motivos del abandono académico y la motivación para el aprendizaje de 335 estudiantes de una universidad privada brasileña. Las correlaciones entre estos constructos, incluida la variable de edad, fueron de pequeña y mediana magnitud. La motivación para aprender, la opción de curso y la intención de deserción explicaron el 46% de la varianza explicada de los motivos del abandono en la dimensión social y el 38% en las dimensiones financiera y académica. Identificamos diferencias estadísticamente significativas en los tres constructos con respecto al género de los estudiantes, la intención del abandono y el curso. Los resultados indican que los motivos del abandono varían según la interacción entre características motivacionales, personales y contextuales. Este estudio apoya la continuidad de las investigaciones sobre el tema y las acciones dirigidas a prevenir el abandono, especialmente en las instituciones privadas.
Palabras clave: deserción académica; metas de realización; atribuciones causales intrapersonales.

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Dropout in Higher Education is a multidimensional phenomenon and a longitudinal process that leads the student to change courses or Higher Education Institutions, and to concern their temporary (one year) or permanent departure without complete the training (Almeida et al., 2019). The motives for dropout are identified in the attributes that one student has when entering higher education, highlighting the quality of his education in primary education and study skills; the type of commitment to the course (established goals); social aspects, linked to interaction and interpersonal integration and effort, which reflects the student's motivational level. Also accounted for as causes for dropout are how the student deals with academic results and the compromise of the student's health and well-being, associated with his physical and psychological conditions (Almeida et al., 2019; Ambiel, 2015; Tinto, 1975, 1997).

Other reasons associated with academic dropout are the institutional aspects that are associated with the motivation for learning, such as the training of the faculty and the type of relationship established between teacher and student; the lack of support for financial problems, expressed in the difficulty to maintain themselves during the course, as well as to reconcile studies with work (Almeida et al., 2019). In this sense, it points to particularities of the financial demands of public and private Higher Education Institutions, such as, for example, the payment of monthly fees and the differences existing in institutional rules that facilitate or prevent the exchange of courses (Almeida, 2019). The reasons related to the career are also highlighted. It is manifested in the student's uncertainties regarding the job market and the lack of identification with the profession's activities (Almeida et al., 2019; Ambiel, 2015; Tinto, 1975, 1997; Tontini & Walter, 2014).

Variables such as gender and age are also considered in monitoring dropout by Higher Education Institutions and government agencies linked to higher education (Almeida, 2019; European Commission, 2015). In Brazil, the 2018 Higher Education Census reports a higher number of dropouts among male students (62%) compared to female students (54.4%) (Ministério da Educação [MEC], 2019). The literature review by Santos, Ferraz, and Inácio (2019) indicates that although male students are more autonomous and optimistic than women, they tend to be less committed to the course and have fewer study skills, which negatively impacts their perception of competence to carry out academic activities.

Regarding age, the 2018 Higher Education Census showed that Brazilian students aged up to 24 years have a higher dropout rate (61%) than those with a higher age group (MEC, 2019). Additionally, the 2019 data from the Higher Education Census indicate that the prevalence is of 19-year-old students (M = 24.3 years; SD = 7.8) (MEC, 2021). This tendency to drop out is not restricted to Brazilian students. In the international context, researchers identified that younger students, especially freshmen, usually have less ability to deal with higher education requirements, both in academic aspects and in interpersonal relationships. Another aggravating factor to age is the entry into higher education of young students from a less favored socio-cultural context, for example, from families with a low level of education (Almeida, 2019; Casanova, 2018; European Commission, 2015).

Concerning the student's commitment to the course, motivation is one of the aspects linked to dropout. Conceptually, motivation indicates the reasons that lead a person to start a behavior, support it, and finish it (Graham, 2020). Motivation works as a protective factor against academic dropout, as it is associated with students' effort, persistence, and self-perceived ability with their academic performance (Balkis, 2018; Casanova, Fernandez-Castañan, Pérez, Gutiérrez, & Almeida, 2018; Dalbosco, Ferraz, & Santos, 2018; European Commission, 2015; Tinto, 1975). Although motivation is understood as something individual, it is also interfered by the context in which students are inserted, especially about the institutional aspects, such as the academic climate and structure of courses (Bardach, Lüftenegger, Oczlon, Spiel, & Schober, 2020; Tinto, 1975).

When students are motivated, they are less likely to drop out (Casanova et al., 2018; European Commission, 2015; Suhlmann, Sassenberg, Nagengast, & Trautwein, 2018). In the research by Tontini and Walter (2014), the lack of congruence between vocational aspects with the course and expectations regarding placement in the job market are factors associated with academic dropout. In this sense, students who have a good self-concept of the course are more motivated to complete it, as they have positive expectations regarding insertion in the job market. Students also feel more motivated when the concepts learned in class are articulated with practical activities (Freitas, Costa, & Costa,

2017). As for mental health, student motivation and well-being are predicted by the sense of belonging in the academic context, which acts as factors that minimize academic dropout (European Commission, 2015; Suhlmann et al., 2018).

The motivational constructs analyzed in this proposal to investigate the reasons for academic dropout were personal achievement goals and intrapersonal causal attributions. Achievement goals refer to the quality of the student's involvement with the academic routine, which includes a dedication to studies, interpersonal relationships (teacher-students and among the students themselves), and how the student views the learning process (Bzuneck & Boruchovitch, 2019; Senko, Hulleman, & Harackiewicz, 2011). In this research, we investigate the incidence of three achievement goals described below.

Students with a mastery goal orienation understand study skills as something that can be developed from their effort prefers to perform tasks that challenge them and is persistent in the face of adversity (Bzuneck & Boruchovitch, 2019; Dalbosco et al., 2018; Senko et al., 2011). These characteristics attenuate the academic context's problems regarding interpersonal relationships and aspects related to the educational institution, which reduces the intention of evasion among students guided by this goal (Bardach et al., 2020).

In turn, in the performance-approach goal orientation, the student's effort is aimed at standing out with fellow students due to the need to recognize people to feel successful. In the performance-avoidance goal orientation, motivation is manifested in the student's effort to avoid low performance. The student's actions are determined by the fear of not being exposed publicly as a poor student (Bzuneck & Boruchovitch, 2019; Senko et al., 2011). Both performance goals are related to high levels of anxiety, mainly in the dissemination of grades, disorganization in studies, and the low interest of students in learning as a means of intellectual gain (Bzuneck & Boruchovitch, 2019; Dalbosco et al., 2018; Senko et al., 2011).

Intrapersonal causal attributions also represent learning motivation. This construct refers to the attribution of causes by the student to explain to himself and other people the reasons that led him to succeed or fail in academic activities. The attribution of causality is classified in terms of its psychological dimensions, namely *lócus* - whether internal or external, having itself as a reference; stability - beliefs that the cause may or may not be changed over time; and controllability - the level of control that the student believes he has over the cause (Graham, 2020; Weiner, 2018).

How students attribute causality to academic success and failure situations positively or negatively impacts their learning motivation in the short and medium-term (Alipio, 2020; Dweck, 2018; Graham, 2020; Weiner, 2018). On the one hand, functional causal attributions motivate students to persist. An example of functional attribution is effort, characterized as an internal, unstable, and controllable cause (Graham, 2020; Weiner, 2018). On the other hand, dysfunctional attributions beliefs denote students' distorted perception of the causes that justify their academic results. This type of belief is marked by the recurrent perception of external, unstable, and uncontrollable causes such as luck and the attribution of responsibility to other people (e.g., teachers, colleagues, and family). Dysfunctional attributional beliefs reflect low expectations for the future. So, it is associated with the student's lack of motivation for learning (Ganda & Boruchovitch, 2016; Graham, 2020; Respondek, Seufert, Hamm, & Nett, 2019).

Regarding the course, it is known that the adaptation to higher education minimizes the motives for academic dropout, being associated linked to professional aspirations, that commonly precedes the choice of the course (Ambiel, Santos, & Dalbosco, 2016; Ferraz, Santos, & Ambiel, 2020), and the motivational quality of students to learn (Ferraz, Lima, & Santos, 2020; Ferraz, Santos, et al., 2020). Araújo (2017) indicated that the lack of adaptation to the course results in a lack of commitment to academic training. Garcia, Lara, and Antunes (2021) also point out that the motives for academic dropout may vary according to the area of knowledge, as students in each course understand the adversities that occur in the academic context in different ways. In turn, the explicit intention to drop out is linked to problems of academic performance, which reflect on the motives for academic dropout, especially among freshmen (Casanova, 2018; Casanova, Gomes, Bernardo, & Nuñez, 2021).

Based on the above, this study aimed to investigate the relationships between motivation to learn, age, gender, course option, and intention to drop out for motives for academic dropout. The specific objectives were: (1) to analyze the correlations between motivation to learn and age for motives for academic dropout; (2) to assess the plausibility of a predictor

model for motives for academic dropout composed of the independent variables achievement goals, causal attributions, age, gender, course option and intention to dropout; (3) verifying whether the motivational constructs and the for motives for academic dropout differ in terms of gender, course option, intention to drop out, and course.

Method

Participants

Participated in this study, 335 Brazilian students from a private higher education institution located in Rio Grande do Sul (M_{age} = 22.73; *SD* = 6.78). Most of the students were female (*n* = 250; 74.6%). The students were studying Psychology, Law, Architecture and Urbanism, and Administration. Of these students, 61 indicated that they were not taking the first option course; 65 said that the higher education institution was not the first choice to pursue higher education, and 114 reported that they intended to drop out.

Instruments

Higher Education Dropout Questionnaire ([*Questionário de Motivos de Abandono do Ensino Superior*] QMA-es; Almeida et al., 2019). The QMA-es has 31 items divided into six factors that assess the student's motives to drop out in higher education: Financial, Institutional, Academic, Teachers, Health and Well-Being, and Social. The answer key is in the Likert format, ranging from 1, Nothing important to 5, Very important. High scores in the QMA-es indicate that the student has the intention to drop out and vice versa. The QMA-es has evidence of validity based on the internal structure and reliability estimates (alpha coefficients ranging from .78 to .90), both obtained from a sample of 542 students from a private Higher Education Institution. The internal structure of the QMA-es for the sample of this research obtained $\chi 2/gl$ = 2.89; RMSEA = .07 (IC .07 - .08); CFI = .92; TLI = .91.

Learning Motivation Assessment Scale ([*Escala de Avaliação da Motivação para Aprendizagem*] EMAPRE-U; Zenorini & Santos, 2010). EMAPRE-U assesses student's learning motivation through the achievement goals. The scale has 28 items divided into three factors: Mastery Goals, Performance-Approach Goal, and Performance-Avoidance Goal. The answer key is a three-point Likert type, 1 - Agree, 2 - I do not know, 3 - Disagree. This scale has good reliability estimates (alpha coefficients > .70), as reported in the studies by Dalbosco et al. (2018) and Santos and Mognon (2016). The internal structure of the QMA-es for the sample of this research obtained $\chi 2/gl$ = 2.31; RMSEA = .06 (IC .06 - .07); CFI = .90; TLI = .90.

Causal Attributions Scale for Academic Success and Failures Situations - Higher Education ([*Escala de Avaliação das Atribuições de Causalidade para Sucesso e Fracasso Acadêmico - Ensino Superior*] EAAC-U; Boruchovith & Santos, 2020). The scale has 31 items divided into four factors. Factor 1 evaluates the control of nervousness/anxiety; Factor 2, the attribution to external and uncontrollable causes for situations of academic failure; Factor 3, the attribution to internal/controllable causes for situations of academic success and Factor 4, the attribution of control for external causes linked to interpersonal relationships (teachers, colleagues, and family). The answer key is a Likert type of four points: 1 - It has nothing to do with me, and 4 - It describes me well. The instrument has validity evidence based on the internal structure and reliability estimates, with alpha coefficient values ranging from .63 (Factor 3) to .81 (Factor 4) (Boruchovitch & Santos, 2020). The internal structure of the QMA-es for the sample of this research obtained $\chi 2/gl$ = 2.54; RMSEA = .07 (IC .06 - .07); CFI = .85; TLI = .84.

Data Collection Procedures

The Ethics Committee of the Educational Institution approved the project (Authorization No 572.676). After obtaining authorization from the higher education institution, the tests were applied collectively and during class hours. To participate in the research, students signed the Term of Free and Informed Consent.

Data Analysis Procedures

Softwares: Statistical Package for Social Sciences (SPSS; V. 22.0) and Mplus (version 7.11; Muthén & Muthén, 1998-2012). The normality and homogeneity of the data variance were explored (Shapiro-Wilk test, $p < .05$; Levene test, $p > .05$, respectively).

Pearson's correlation (*r*). The interpretation of the magnitudes of the correlations was based on $r < .29$, small; between .30 to .49, medium; $r > .50$, large (Goss-Sampson, 2020).

Path analysis. First, we tested a model with all the test factors and variables (saturated model). We excluded independent variables ($p > .05$) from composing a new analysis (restricted model). Adjustment indexes for model interpretation: $\chi 2$ test value with $p >$

.05; Root Mean Square Error of Approximation - CI 90% (RMSEA; < .05 very good adjustment; .06 and .10 acceptable adjustment; > .10 unacceptable adjustment); Comparative Fit Index (CFI) and Tucker Lewis Index (TLI; < .95 very good adjustment; .90 to .94 good adjustment; .80 to .89 poor adjustment; > .80 bad adjustment) (Marôco, 2014).

Group comparison: Student's *t*-test. To determine the effect of statistical significance in the group comparison analyzes we used Cohen's *d* (*d* < .49, small; .50 to .79, medium; *d* > .8, large; Goss-Sampson, 2020). Analysis of variance (ANOVA) with Tukey's *post hoc* test. The effect size was verified through the eta squared (ηp*2* < .01, trivial; .02 to .05, small; .06 to .13, medium; > .14, large; Goss-Sampson, 2020). In both tests, we applied the bootstrap method (1000 samples).

Results

First, we examined the correlations between the student's motives for academic dropout, motivation for learning (personal achievement goals and intrapersonal causal attributions), and age. Table A1 demonstrates statistically significant and small magnitude correlations between the motives for academic dropout with these three variables. Most of these correlations centered on academic and health, and well-being reasons for dropping out. Positive direction correlations between motives for dropout in academic dimension with the attribution of nervousness control (EAAC Factor 1) and the attribution of internal and controllable causes to explain success (EAAC Factor 2) indicate the convergence of the difficulties of dealing with the study routine, the lack of nervousness control, and external attribution and uncontrollable causes to justify academic performance. The performance-avoidance goal orientation, marked by a student's fear of being exposed by his perception of disability, was also positively correlated with motives for dropout in the academic environment. The oldest age group had a positive correlation with academic reasons for dropping out. Correlations of negative direction between the motives for dropping out on the academic dimension with the mastery goal orientation and attributing control to interpersonal relationships to explain academic performance (Factor 4 of EAAC-U) suggest that prioritizing intellectual gains through studies and perceiving academic success as an internal and controllable cause contrasts with the motives for dropout linked difficulties concerning the study routine.

By focusing on causal attributions, the attribution of success to internal and controllable causes (EAAC Factor 3) was positively associated with four motives for academic dropout – financial, teachers, institutional, and interpersonal relationships. In turn, this same pattern of attributing causality to academic success was negatively related to the academic motives for dropout linked to health and well-being. The perception of control in interpersonal relationships (Factor 4 EAAC) seems to minimize the motives for dropping out on the health and well-being dimension and maximize the reasons related to institutional aspects. The positive correlations also suggest that the academic motives for dropout of health and well-being seem to increase concerning the attribution of success to external and uncontrollable causes (Factor 2 EAAC), among the students with performance-avoidance goal orientation and older students. The pattern of attributing causality to external and uncontrollable causes to explain success presents increases the motives for academic dropout in the social dimension. At the same time, the mastery goal orientation seems to reduce them.

Table A1 also shows that all the reasons for dropout had statistically significant correlations in a negative direction. The magnitude of these correlations indicates that the financial dimension has a strong relationship with the teacher and academic dimensions, a medium relationship with institutional and social aspects, and a small relationship with health and well-being. The institutional dimension had a strong relationship with the assessment that students make about the competencies of teachers to teach, a medium relationship with the social and academic dimensions, and a small relationship with the dimension of health, and well-being. The academic dimension was closely related to the social, teacher, and health and well-being dimensions. The dimension composed of the teachers' competencies had a strong relationship with interpersonal relationships and a small relationship with health and well-being. Finally, the social dimension had an average relationship with health and well-being.

About motivational constructs, statistically significant differences of medium magnitude were found, indicating negative associations between the mastery goal orientation and the attribution of success to external and uncontrollable causes (Factor 2 EAAC). This way of attributing causality to academic success was positively correlated with the performance-avoidance goal and the performance-approach goal (medium and small

magnitude, respectively). The attribution of control to causes linked to interpersonal relationships (Factor 4 EAAC) was negatively correlated with the mastery goal and positively correlated with the performance-avoidance goal orientation - medium magnitude. Attributing anxiety control (Factor 1 EAAC) had a small correlation with the mastery goal while attributing lack of control to situations perceived as anxiety-provoking was positively associated with the performance-avoidance goal. The attribution of internal and controllable causes to justify academic success (Factor 3 EAAC) was positively related to the mastery goal and negatively related to the performance-avoidance goal - small magnitude.

The incongruity between the orientation of the mastery goal and the performance-avoidance goal was observed among the achievement goals. It was also verified that older students had characteristics of the mastery goal and younger ones had aspects of the performance-avoidance goal.

In the statistically significant correlations between the intrapersonal causal attributions, the attributing of control to interpersonal relationships as a cause linked to academic performance (Factor 4 EAAC) was negatively related to the attribution of success to external and uncontrollable causes (Factor 2 EAAC), negatively with the attribution of internal and controllable causes for successful situations (Factor 3 EAAC), and the attribution of anxiety control (Factor 1 EAAC) - medium magnitude. Attributing control to nervousness (Factor 1 EAAC) had a positive and medium magnitude relationship with attributing external and uncontrollable causes to academic success. In turn, attributing success to internal and controllable causes (Factor 3 EAAC) was negatively related to the perception of anxiety control and the attribution of external and uncontrollable causes in situations of academic success.

In the next step, we investigated a predictive model to the motives for academic dropout (outcome variables), constituted by the independent variables age, gender, first-course option, and intention to drop out. Based on the results of the saturated model, we tested the first restricted model: financial dimension (DV) with the mastery goal and the Performance-Approach Goal (VI); institutional dimension (DV) with the Performance-Approach Goal (VI); academic dimension (VD) with the intention to drop out and the mastery goal (VI); social dimension (DV) age, first-option of course, mastery goal, and external/uncontrollable causal attributions for failure situations (IV). The restricted model 1 obtained $\chi 2 = 27.262$, gl = 21 ($p = 0{,}16$); CFI = .99; TLI = .98; RMSEA = .03 (IC .01 - .06). For the construction of the restricted model 2, we excluded the independent variables age and performance-avoidance goal related to the outcome variable motives for academic dropout in the social dimension (values of β with $p > .05$).

Table 1. Correlations between motives for academic drop, motivation for learning and age (n = 335)

Fator	*M*	SD	Fin	Inst	Acad	Teac	Hea	Soc	MG	PApG	PAaG	F1	F2	F3	F4
Fin	3.28	1.11	(.86)												
Inst	2.79	1.03	**.47*** **	(.84)											
Acad	2.74	.97	**.50*** **	**.44*** **	(.83)										
Teac	2.86	1.15	.64***	**.64*** **	**.57*** **	(.93)									
Hea	2.86	1.15	**.21*** **	**.12***	**.51*** **	**.18*** **	(.90)								
Soc	2.13	.94	.48***	.47***	.60***	.66***	**.42*** **	(.81)							
MG	2.61	.34	.01	.04	**-.14****	-.04	-.08	**-.11***	(.91)						
PApG	1.69	.48	.06	.03	.04	.04	.03	.10	.01	(.90)					
PAaG	1.62	.58	-.01	-.07	**.12***	.01	**.13***	.05	**-.37*** **	.10	(.92)				
F1	2.23	.82	.01	.01	**.13***	-.02	.06	-.02	**-.21*** **	.04	**.23*** **	(.83)			
F2	1.43	.34	.03	-.01	**.29*** **	.08	**.21*** **	**.14****	**-.31*** **	**.13***	**.32*** **	**.37*** **	(.84)		
F3	3.06	.51	**.19*** **	**.14****	-.01	**.17****	**-.11***	**.13***	**.27*** **	-.05	**-.11***	**-.15****	**-.22*** **	(.74)	
F4	2.83	.53	.10	**.12***	**-.15****	.08	**-.13***	.07	**.39*** **	.04	**-.33*** **	**-.39*** **	**-.46*** **	**.42*** **	(0.89)
Age	22.73	6.78	.04	.06	**.16****	.01	**.13***	.06	**.12***	-.03	**-.14****	-.09	-.06	-.09	.04

Note. *M* = Mean; *SD* = Standard Deviation; QMA-es Factors: Fin = Financial; Inst = Institucional; Acad = Academic; Teac = Teachers; Hea = Health and Well-Being; Soc = Social; EMAPRE-U Factors: MG = Mastery Goals; PApG = Performance-Approach Goal; PAaG = Performance-Avoidance Goal; EAAC-U Factors: F1 = Fator 1 causal attributions of anxiety/nervousness; F2 = External/uncontrollable causal attributions for failure situations; F3 = Internal/controllable causal attributions for success situations; F4 = external causal attributions for interpersonal relationships.
Values in parentheses refer to the composite reliability indices of the instruments.
Values highlighted in bold had statistical significance – $^{***}p < .001$; $^{**}p < .01$; $^{*}p < .05$.

The model represented by Figure 1 presented χ2 = 19.840; *df* = 12 (*p* = .07) and the adjustment indexes are classified as very good, RMSEA = .04 (90% CI .01 - .08), CFI = .98 and TLI = .97. The model indicates that three motives for academic dropout were predicted by motivational for learn, first-option of course and intention to drop out. The social dimension had 46% of its variance explained by the mastery goal (β = .52; *EP* = .03), the attribution of external and uncontrollable causes to the academic success results (β = .36; *EP* = .04), and the course option (β = .10; *EP* = .04). The academic dimension for dropout had 38% of its variance explained by the mastery goal (β = .59; *EP* = .04) and intention to drop out (β = .14; *EP* = .04). The variance of the financial dimension was explained at 38% by the mastery goal (β = .58; *EP* = .03) and the performance-approach goal (β = .18; *EP* = .04). The performance-approach goal orientation represented an increase of .14 points for the motives for dropout in institutional dimension. However, this predictive relationship was not statistically significant in terms of explained variance for the this dropout dimension.

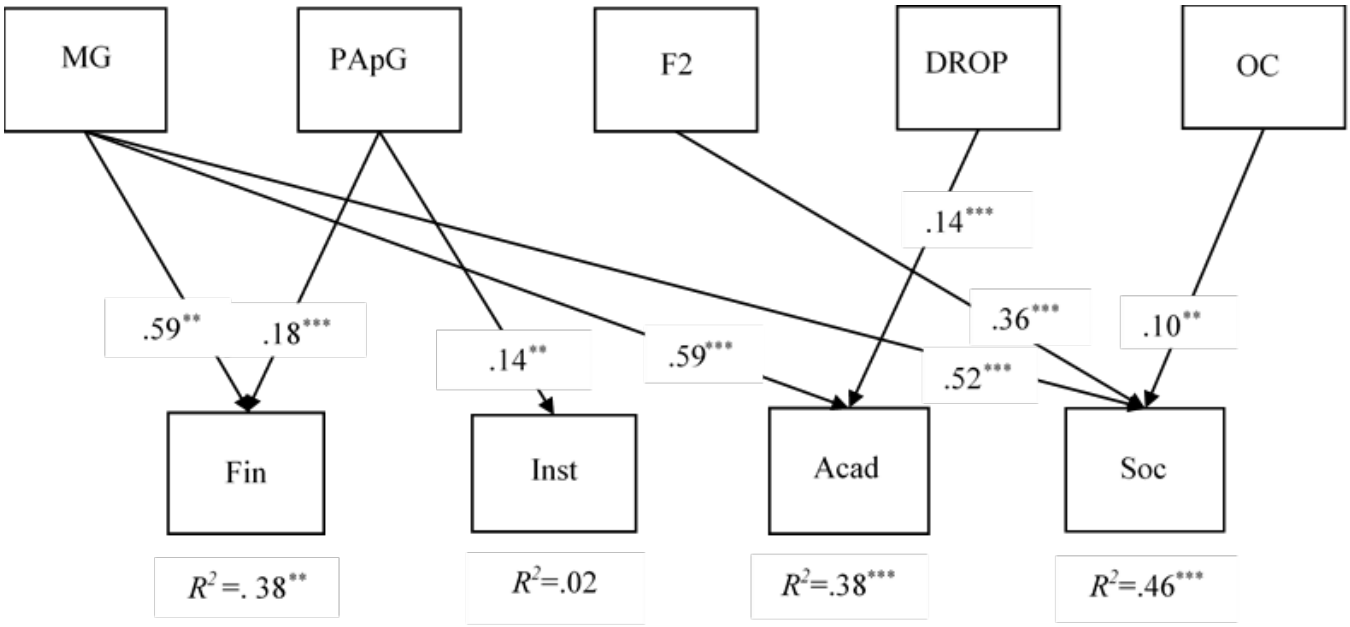

Figure 1. Prediction model of motives for academic dropout.

Note. FCO = First-Option of Course; IDO = Intention to Drop out; QMA-es Factors: Fin = Financial; Inst = Institucional; Acad = Academic; Soc = Social; EMAPRE-U Factors: MG = Mastery Goals; PApG = Performance-Approach Goal; EAAC-U Factors: F2 = External/uncontrollable causal attributions for failure situations. Values highlighted in bold had statistical significance – ***p < .001; **p < .01; *p < .05.

Next, we compared the students' functioning with the motives for academic dropout and the motivation for learning considering the variables gender, first-course option, intention to drop out. Table B2 highlights the statistically significant comparisons and the respective effect size values.

Finally, we investigated the differences in motives for academic dropout and motivation for learning due to the course variable. Table 3 shows the statistically significant results, effect size and comparison of means generated by Tukey's post hoc test. The other comparisons with the course were not statistically significant, namely, motives for academic dropout in the institutional dimension – $F(3, 330) = .724$ ($p = .54$); academic dimension – $F(3, 330) = .319$ ($p = .81$); teachers dimension – $F(3, 330) = 1.792$ ($p = .15$); social dimension – $F(3, 330) = 1.154$ ($p = .33$); attribution of anxiety control in situations of academic success and failure (Factor 1 EAAC) – $F(3, 330) = 1.555$ ($p = .20$); and assignment of control of interpersonal relationships to justify academic performance (Factor 4 EAAC) $F(3, 330) = 1.948$ ($p = .12$).

Table 2. Motives for academic dropout and motivation for learn: comparison of groups (gender, first option of course, and intention to dropout)

IV	Gender					First-option of course					Intention to drop out				
	t	Groups	*M*	*SD*	*d*	*t*	Groups	*M*	*SD*	*d*	*t*	Groups	*M*	*SD*	*d*
Fin	**-1.973***	Mal	3.08	1.04	.25	-.442	Yes	3.27	1.13	.06	-1.620	Yes	3.14	1.20	.19
		Fem	3.35	1.14			No	3.34	1.02			No	3.36	1.05	
Inst	**-2.002***	Mal	2.59	1.03	.25	-.969	Yes	2.76	1.04	.14	**-2.230***	Yes	2.61	1.07	.26
		Fem	2.85	1.03			No	2.90	.99			No	2.88	1.00	
Acad	**-2.024***	Mal	2.56	.96	.26	-1.842	Yes	2.70	.96	.26	**3.220*****	Yes	2.98	.99	.37
		Fem	2.81	.96			No	2.95	.96			No	2.62	.93	
Teac	-1.797	Mal	2.67	1.13	.22	-.586	Yes	2.84	1.15	.09	-.999	Yes	2.77	1.22	.11
		Fem	2.92	1.15			No	2.94	1.13			No	2.90	1.10	
Heal	-1.700	Mal	2.23	.93	.23	.947	Yes	2.42	1.01	.13	**4.669*****	Yes	2.74	1.01	.53
		Fem	2.45	1.01			No	2.29	.90			No	2.22	.93	
Soc	-.556	Mal	2.08	1.01	.07	-1.438	Yes	2.10	.93	.20	.957	Yes	2.20	.94	.11
		Fem	2.15	.91			No	2.29	.95			No	2.10	.94	
MG	-.913	Mal	2.58	.37	.11	1.115	Yes	2.61	.33	.14	**-4.437*****	Yes	2.48	.39	.55
		Fem	2.62	.33			No	2.56	.39			No	2.67	.30	
PApG	2.705**	Mal	1.82	.49	.35	.229	Yes	1.70	.48	.04	1.037	Yes	1.73	.50	.10
		Fem	1.65	.47			No	1.68	.49			No	1.68	.47	
PAaG	-.658	Mal	1.59	.55	.09	1.020	Yes	1.64	.59	.14	**2.572****	Yes	1.74	.63	.31
		Fem	1.64	.59			No	1.56	.53			No	1.56	.54	
F1	**-2.465****	Mal	2.05	.72	.30	-.408	Yes	2.22	.82	.06	1.770	Yes	3.34	.84	1.42
		Fem	2.29	.85			No	2.27	.85			No	2.17	.81	
F2	1.385	Mal	1.48	.39	1.22	-.929	Yes	1.42	.34	.14	2.575**	Yes	1.50	.36	.32
		Fem	1.41	.33			No	1.47	.36			No	1.39	.33	
F3	-.749	Mal	3.02	.55	.09	1.461	Yes	3.08	.51	.21	**-3.482*****	Yes	2.92	.50	.41
		Fem	3.07	.50			No	2.97	.52			No	3.13	.51	
F4	-1.075	Mal	2.78	.56	.13	1.132	Yes	2.85	.53	.17	**-3.958*****	Yes	2.67	.58	.46
		Fem	2.85	.52			No	2.76	.55			No	2.92	.49	

Note. IV = Independent Variable; *M* = Mean; *SD* = Standard Deviation; *d* = Cohen's d; Mal = Male; Fem = Female; QMA-es Factors: Fin = Financial; Inst = Institucional; Acad = Academic; Teac = Teachers; Hea = Health and Well-Being; Soc = Social; EMAPRE-U Factors: MG = Mastery Goals; PApG = Performance-Approach Goal; PAaG = Performance-Avoidance Goal; EAAC-U Factors: F1 = Fator 1 causal attributions of anxiety/nervousness; F2 = External/uncontrollable causal attributions for failure situations; F3 = Internal/controllable causal attributions for success situations; F4 = external causal attributions for interpersonal relationships.

Table 3. Motives for academic dropout and motivation for learn: comparison of groups (course)

Factors	*F**	*ηp²*	Course	*N*	subsets	
					1	2
Financial	6.566 *p* < .001	.07	Psychology	197	3.46	3.46
			Law	72	2.92	
			Architecture/Urbanism	42	2.90	
			Administration	23		3.51
			P		.060	.996
Health and Well-Being	3.049 *p* < .05	.03	Psychology	197	2.42	2.42
			Law	72	2.14	
			Architecture/Urbanism	42		2.70
			Administration	23	2.39	2.39
			P		.520	.422
Mastery Goals	3.832 *p* < .05	.03	Psychology	197		2.65
			Law	72	2.57	2.57
			Architecture/Urbanism	42	2.55	2.55
			Administration	23	2.43	
			P		.215	.494
Performance-Approach Goal	5.586 *p* = .001	.05	Psychology	197	1.65	
			Law	72	1.80	1.80
			Architecture/Urbanism	42	1.58	
			Administration	23		1.99
			P		.117	.217
Performance-Avoidance Goal	2.987 *p* < .05	.03	Psychology	197	1.64	1.64
			Law	72	1.65	1.65
			Architecture/Urbanism	42	1.41	
			Administration	23		1.83
			P		.186	.406
Factor 2	2.774 *p* < .05	.02	Psychology	197	1.39	
			Law	72	1.48	
			Architecture/Urbanism	42	1.48	
			Administration	23	1.55	
			P		.091	
Factor 3	3.887 *p* < .01	.03	Psychology	197		3.13
			Law	72	3.03	3.03
			Architecture/Urbanism	42	2.94	2.94
			Administration	23	2.80	
			P		.145	.298

Note. Factor 2 (EAAC-U) = External/uncontrollable causal attributions for failure situations; Factor 3 (EAAC-U) = Internal/controllable causal attributions for success situations.
*df = 3.

Discussion

Identifying statistically significant correlations of the motives for dropout with achievement goals and intrapersonal causal attributions suggests that learning motivation is one of the causes related to motives for academic dropout (Freitas et al., 2017; Suhlmann et al., 2018). The small magnitude of these correlations confirms that the motives for dropout are part of a more extensive process, which involves other motivational constructs and components that were not part of this paper. For example, this statement is based on the relationship between the motives for dropout and the low levels of academic self-efficacy of students (Casanova et al., 2018), the low career adaptability (Ambiel et al., 2016), in their dissatisfaction with the choice of the course, the lack of academic adaptation and financial difficulties (Ambiel & Barros, 2018). Regarding this last aspect, it is pertinent to investigate the interference of financial conditions as a motive for academic dropout in future studies, mainly among female students with young children (Casanova, 2018).

We found that older age groups were related to the motives for dropout of the academic and health and well-being dimensions and vice versa. In part, this result refutes our initial hypothesis, as it was expected that the motives for academic dropout were related to younger students (Almeida, 2019). However, this assumption is mainly directed to freshmen students who, for some reason, have difficulties in adapting to the context of higher education, which may even have repercussions on the dropout from the course (Almeida, 2019; Casanova, 2018; MEC, 2019). When considering motivation, it was observed that older students were more likely to present a mastery goal orientation. In comparison, younger students had a profile focused on the performance-avoidance goal orientation. In this sense, it is highlighted that achievement goals are not immutable traits, being subject to change in all age groups and educational levels, through the contact of students with the academic context (e.g., interference of educational practices and configuration of educational institutions on student motivation) (Bardach et al., 2020; Bzuneck & Boruchovitch, 2019; Senko et al., 2011).

In the model tested in this study, it was found that the achievement goals, learning goal and performance-approach goal, external and uncontrollable causal attributions for academic success and failure results, first-course option and intention to drop out predicted the reasons for the academic evasion of the social, academic and financial dimensions Despite age being associated with motivational aspects related to learning, this variable did not predict the motives for academic dropout, as observed in the study by Fior (2021), also carried out with a sample of private higher education students.

The model tested that the achievement goals mastery goal and performance-approach goal, the external and uncontrollable causal attributions for academic success and failure results, first-course option, intention and to drop out and age predicted the motives for the academic dropout of the social, academic, and financial dimensions. The mastery goal orientation is associated with the students' adaptation to the study routine, which tends to minimize the motives for dropout linked to academic performance (Ferraz, Lima, et al., 2020). However, some characteristics of this achievement goal, as higher levels of criticality and curiosity to learn, may raise questions about whether the course is meeting your expectations of personal and intellectual growth, as well as financial return. In this sense, the performance-avoidance goal orientation, centered on obtaining recognition through good performance, also seems to impact the motives for academic dropout linked to financial and institutional aspects (Bzuneck & Boruchovitch, 2019).

Causal attributions, in turn, may reflect the use of self-handicapping strategies. These strategies are by students to preserve their self-concept. However, they negatively affect academic performance. Ganda and Boruchovitch (2016) found that students who reported the self-handicapping strategies aimed at problems in time management presented external causal attributions for academic success. Therefore, attributional beliefs must be investigated in a broader perspective, encompassing the motivational quality of students and its repercussions for adaptation to higher education and academic dropout.

The observance of students whether or not they are attending the first course of their choice was a predictor variable of the motives for academic dropout in the social dimension. It may be associated with the particularities of the social relationships established with colleagues and teachers and the service provided to their students students' expectations about personal and professional planning (Ambiel et al., 2016; Casanova, 2018; Freitas et al., 2017; Tontini & Walter, 2014). In turn, the results of this study indicated that

the intention to dropout directly affects only issues associated with the academic dimension. Future studies should assess whether the manifestation of intention to drop out is a good predictor of other motives for academic dropout, as this variable was identified as a risk factor for dropout among first-year higher education students in the study by Casanova et al. (2021) and is one of the variables investigated by the QMA-es de Almeida et al. (2019). This proposition must also consider that the decision to give up higher education is not an immediate action, as a dropout is a process that has multiple indicators (Casanova, 2018). The medium and large magnitude of the correlations we identified between the dimensions of the motives for academic dropout corroborates this view.

This study also demonstrated that college students who intend to dropout have more motives for academic dropout, emphasizing academic difficulties and physical and psychological problems (Almeida et al., 2019; Casanova, 2018; Tinto, 1975). The motivational profile of the performance-avoidance goal is one factor that compromises these students' psychological well-being since the academic routine is perceived as aversive and generates anxiety (Bzuneck & Boruchovitch, 2019; Senko et al., 2011). Furthermore, the students' inclination to justify academic failure through external and uncontrollable causes is an indication of self-perceived inability to improve performance in the course, which can also impact their health (Almeida et al., 2019; Dalbosco et al., 2018; Ganda & Boruchovitch, 2016; Suhlmann et al., 2018).

When the students do not intend to drop out, the motives refer to institutional aspects, which may be associated with a mastery goal orientation and attribution of internal and controllable causes for academic results. These motivational profiles are more critical to assess higher education institutions concerning the quality of teacher training and didactics, the availability of services that contribute to their professional growth, such as the provision of internships and events, and the infrastructure for the acquisition of technical and scientific knowledge, as laboratories, computer rooms, among others (Almeida, 2019; Bardach et al., 2020; Bzuneck & Boruchovitch, 2019).

Female students stood out from male students in financial, institutional, and academic motives for dropout. They had motivation oriented by the performance-approach goal and indicated the lack of control of anxiety in the causal attributions for academic success and failure situations. The motives to drop out for academic and institutional link to the students' fear of being exposed for their low achievement, and the lack of recognition of their skills and performance (Senko et al., 2011). Consequently, students' anxiety is accentuated, and, in this case, they indicate that they can not control it, which can discourage them from attending the academic environment (Bzuneck & Boruchovitch, 2019; Senko et al., 2011). Besides, women perceive themselves to be less autonomous and more pessimistic than men, hindering their adaptation to higher education (Santos et al., 2019).

For course type, Administration students, compared to other courses, were the ones who most pointed to the financial and health, and welfare as motives for academic dropout. These motives may be, in part, associated with the performance-approach goal and performance-avoidance goal orientations that were prevalent in these students (Bzuneck & Boruchovitch, 2019) and the lack of perception of control over attributional causes related to interpersonal relationships (Ganda & Boruchovitch, 2016).

The motivational profile for the mastery goals stood out in Psychology students compared to those studying Administration, the opposite being suitable for the performance-approach goal orientation. This result indicates that Psychology students showed greater interest and curiosity in the course subjects, while in Administration, students were more concerned with their performance, both quantitative, through high marks, and qualitative, based on recognition colleagues and teachers regarding their academic results (Almeida et al., 2019; Ambiel, 2015; Bzuneck & Boruchovitch, 2019). Still, regarding the course variable, it is recognized that the sample size of the Administration course was smaller than the other courses evaluated. Therefore, more students must be included in future research to ensure greater representativeness between courses. In addition, investigating the motivation to learn and the motives for academic dropout in different courses can point to the development of interventions consistent with the demands of students. It focuses on institutional aspects (e.g., infrastructure, offer of internship vacancies, training programs extension) and the faculty members (e.g., ability to articulate theory with practice, level of demand versus the quality of established relationships, performance feedbacks) (Araújo, 2017; Casanova et al., 2018; Garcia et al., 2021; Ferraz, Santos, et al., 2020; Freitas et al., 2017).

In addition to these findings, one of the ways to ensure that students complete higher education is to know the potential motives for dropout, emphasizing learning motivation. From this perspective, the relevance of continuing studies on this theme converges with the limitations of this study. It was not possible to cover some aspects that are also relevant for deepening knowledge about the motives for dropout. Thus, it is worth investigating future research when the youngest students are present and have a motivational commitment, as well as deepening their knowledge about the socioeconomic and emotional components since the financial and health, and well-being aspects frequently appear as motives for academic dropout and the potential problems with the academic adaptation.

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