

Personality y academic emotional exhaustion in peruvian college students: a predictive study

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Abstract

Personality is a relevant feature to predict the student's academic behavior, and its association with academic emotional exhaustion is still a recent topic. The aim was determine the predictive ability of personality on academic emotional exhaustion in 453 college students (60.9% women) between ages 17 and 40 years old, who were assessed with the Emotional Exhaustion Scale and the Big Five Inventory-15p. Was implemented a regression multiple analysis on emotional exhaustion, with the personality traits as predictors. The findings shows that the personality traits explain significantly the emotional exhaustion ($R^2 > .20$), and the neuroticism, extraversion and consciousness predict the emotional exhaustion. In conclusion, the predictive ability of personality on academic emotional exhaustion is significant. The practical consequences and limitations are discussed.

Keywords: Personality; Academic emotional exhaustion; College students

Personalidad y agotamiento emocional académico en estudiantes universitarios peruanos: un estudio predictivo

Resumen

La personalidad es una característica relevante para predecir la conducta académica del estudiante, y su asociación con el agotamiento emocional académico aún es un tópico reciente. El propósito de la presente investigación fue analizar la capacidad predictiva de los cinco grandes factores de personalidad sobre el agotamiento emocional académico en universitarios, en una muestra de 453 estudiantes (60.9% mujeres) entre 17 y 40 años de edad, quienes fueron evaluados con la Escala de Cansancio Emocional y el Big Five Inventory-15p. Fue implementado un análisis de regresión múltiple para agotamiento emocional académico con los rasgos de personalidad como predictores. Los resultados indican que los rasgos de personalidad explican significativamente el agotamiento emocional ($R^2 > .20$), y el neuroticismo, extraversión y

responsabilidad predicen el agotamiento emocional académico. En conclusión, la capacidad predictiva de los rasgos de personalidad sobre el agotamiento emocional académico es significativa. Se discuten las consecuencias prácticas y las limitaciones del estudio.

Palabras clave: Personalidad; Agotamiento emocional académico; Estudiantes universitarios

Personalidade e exaustão emocional acadêmica em universitários peruanos: um estudo preditivo

Resumo

A personalidade é uma característica relevante para prever o comportamento acadêmico do aluno, e sua associação com a exaustão emocional acadêmica ainda é um tópico recente. O objetivo da presente investigação foi analisar a capacidade preditiva dos cinco fatores de personalidade na exaustão emocional acadêmica de universitários em uma amostra de 453 estudantes (60,9% mulheres) entre 17 e 40 anos, avaliados com a Escala de Exaustão Emocional e o Big Five Inventory-15p. Uma análise de regressão múltipla para exaustão emocional acadêmica foi implementada, com traços de personalidade como preditores. Os resultados indicam que os traços de personalidade explicam significativamente a exaustão emocional ($R^2 > .20$), e o neuroticismo, a extroversão e a responsabilidade predizem a exaustão emocional acadêmica. Concluindo, a capacidade preditiva dos traços de personalidade no esgotamento emocional acadêmico é significativa. As consequências práticas e limitações do estudo são discutidas.

Palavras-chave: Personalidade; Exaustão emocional acadêmica; Estudantes universitários

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Introduction

Recently, the study of academic burnout (AB) has become more important (Martínez & Marques, 2005) due to its personal and academic consequences (Escuderos, Colorado, & Sañudo, 2017). Its study was possible because Schaufeli, Martínez, Marques, Salanova, & Bakker (2002) reported that the dimensions of burnout—normally observed in the work environment—are also present in the university setting because students can develop burnout because of their studies. Therefore, considering the above and that university students are exposed to factors similar to those of the work environment (physical space attended daily, demands, assignments, objectives

to be met, etc.), it is possible to trigger burnout (Salanova, Bresó, & Schaufeli, 2005; Salanova, Schaufeli, Martínez, & Bresó, 2010).

This way, emotional exhaustion (EE), the result of academic demands, later leads to a cynical attitude and little interest in studies, and finally to beliefs of low self-efficacy. This finding has been supported by identifying that personal, social, and organizational obstacles in the university setting are positive predictors of AB; while personal, social, and organizational facilitators predict AB negatively (Salanova et al., 2010), given that the experiences of failure or lack of skills in some aspects lead to AB, conceived as an efficacy crisis (Salanova, Martínez, Bresó, Llorens, & Grau, 2005).

Maslach and Leiter's current approach (2016), although focused on work environments, argues

that EE is the first dimension of burnout that develops as a response to demands and overload because it is a basic response to stress (Maslach, 2003) which would later lead to the consolidation of burnout. Likewise, in the academic field, EE increases as the academic term progresses (Galbraith & Merrill, 2012), which presents an implicit association with the difficulty of the courses and the fact of facing periodic evaluations. For these reasons, EE is considered the core of burnout (Salanova et al., 2005), a theory that concurs with theoretical approaches such as those of Kristensen, Borritz, Viladse, & Christensen (2005). Therefore, this research considers EE as a one-dimensional construct, representative of AB that can be studied in the educational setting (Nikodijević, Labrović, & Đoković, 2012; Tuithof et al., 2017).

In academic burnout studies, research on emotional exhaustion has been focused on the identification of variables associated with its development (academic setting, social environment, and interpersonal variables) and its consequences, such as low academic performance, physical and mental health disorders, as well as excessive alcohol consumption, anxiety, and depression, etc. (Caballero, Hederich, & Palacio, 2010; Galbraith & Merrill, 2015; Jackson et al., 2016; Pagnin et al., 2014; Pereira-Lima & Loureiro, 2015). Taking into account the variables that promote the development of academic burnout, there are some proposals that suggest that the starting point is the lack of balance between the demands of the academic setting and the student's resources (Caballero et al., 2010); in addition to being seen as the result of poor coping with events perceived as adverse in the academic life (Arias-Gundin & Vizoso, 2018). Consequently, personal variables would become relevant in the study of emotional exhaustion.

Regarding the personal factor, some relevant correlates linked to an individual's emotional sphere have been identified. For example, poor emotional regulation is associated with a greater number of emotional exhaustion symptoms (Gonzalez, Souto, Fernández, & Freire, 2011; Duru, Duru, & Balkis, 2014). Also, the frequent use of emotional regulation strategies, such as self-blame, rumination, and catastrophizing, intensifies emotional exhaustion, and promotes

the development of academic burnout (Dominguez-Lara, 2018). In addition, the use of coping strategies such as emotional avoidance (Palacios, Caballero, González, Gravin, & Contreras, 2012), beliefs of academic inefficacy (Palacios et al., 2012; Salanova et al., 2005; Yu, Chae, & Chang, 2016), external locus of control, and low self-esteem (Ramos, Manga, & Morán, 2005), are strong predictors of emotional exhaustion and academic stress. It is also suggested that the occurrence of burnout is linked to personality traits (Alarcon, Eschleman, & Bowling, 2009; David, 2010; García-Izquierdo, Ramos-Villagrasa, & García-Izquierdo, 2009; Polo, Santiago, Navarro, & Alí, 2016), so it is necessary to study their relationship in the academic field (Ferrel, Ferrel, Cantillo, Jaramillo, & Jiménez, 2017).

The influence of personality on academic burnout can be explained within the framework of the cognitive-affective personality system (Mischel & Shoda, 1995), according to which an individual's personality affects how information from the environment is evaluated. This way, people can encode their beliefs, reactions, and self-regulation plans to control their impulsive behaviors, frustrations, and fears. Thus, these codes are called cognitive-affective units, which serve to explain the relationship between personality and behavior (Mischel & Ayduk, 2002). So, applying it to the university setting, according to the student's personality structure, he or she would interpret the signals of the academic environment and react based on that evaluation. For example, a person with a high degree of neuroticism would interpret a certain number of tasks or exams as extremely threatening and would be destabilized by them, while someone with a lower degree of neuroticism would be able to establish an action plan to successfully face that demand (Armon, Shirom, & Melamed, 2012).

Therefore, in this context, the Big Five factor model (B5F; Benet-Martínez & John, 1998) is considered a framework of reference that provides descriptive information of various traits (extraversion, agreeableness, conscientiousness, neuroticism, and openness) and provides sufficient empirical evidence in several fields of application of psychology, including its association with

variables linked to the academic behavior of university students. For example, the relationship of such traits with academic self-efficacy (conscientiousness and openness; Caprara, Vecchione, Alessandri, Gerbino, & Barbaranelli, 2011; McIlloy, Poole, Ursavas, & Moriarty, 2015), academic performance (neuroticism and conscientiousness; De Feyter, Caers, Vigna, & Berings, 2012), academic procrastination (conscientiousness and agreeableness; Boysan, & Kiral, 2016), academic motivation (neuroticism and conscientiousness; Clark & Schroth, 2010; McGeown et al., 2014), among others, has been documented. In this sense, some efforts have been made to understand the association between personality and academic burnout (Caballero et al., 2010), although other conceptual frameworks, such as Cloninger's biopsychosocial personality model, suggest that individuals who inhibit their behavior to avoid harm and those who have a low level of autonomy or self-direction are more likely to experience burnout (Lee, Choi, & Chaeb, 2017). Similarly, having Type D personality traits increases the risk of burnout (Skodova, Lajciakova, & Banovcinova, 2017). Nevertheless, there are no studies in the Peruvian context.

It has been possible to specifically identify that neuroticism (García-Izquierdo et al., 2009; Langelaan, Bakker, van Doornen, & Schaufeli, 2006; Morgan & De Bruin, 2010; Sulea, van Beek, Sarbescu, Virginia, & Schaufeli, 2015), negative temperament (Jacobs & Dodd, 2003), and anxiety (Cebrià et al., 2001) are predictors of emotional exhaustion, although conscientiousness and openness are likely to predict academic burnout due to the direct relationship of these traits to beliefs about the student's academic behavior, for example, academic self-efficacy. Besides, resilient personalities have been found to have a modulating effect on burnout (da Silva et al., 2014; Garrosa, Rainho, Moreno-Jiménez, & Monteiro, 2010; Moreno, Morett, Rodríguez, & Morante, 2006; Ortega, Ortiz, & Coronel, 2006), meaning that its presence may facilitate or minimize the presence of burnout. However, healthy personality traits may even experience academic burnout when students are exposed to challenging and competitive academic demands for a long time (Lee et al., 2017), even if the strategies used by the

teacher favor student involvement (Hortigüela & Pérez-Pueyo, 2016).

Finally, based on previous studies, it can be stated that personality is an important factor in the occurrence of emotional exhaustion. However, the study of both variables together is often overlooked (Morgan & De Bruin, 2010). Thus, this work aimed to study the predictive capacity of the B5F on emotional exhaustion in Peruvian university students, since evidence suggests that several personality traits could be risk factors for its occurrence. Thus, considering the previous evidence, the study hypothesis indicates that the personality trait of neuroticism would be a positive predictor of academic burnout, while conscientiousness and openness are negative predictors.

Method

Design

Based on its characteristics, this research is a predictive cross-sectional study (Ato, López, & Benavente, 2013), considering that it analyzed the influence of personality (predictors) on academic emotional exhaustion (criterion).

Participants

Four hundred fifty-three (453) students (60.9% women), between the ages of 17 and 40, were evaluated ($M_{age} = 20.89$; $SD_{age} = 2.688$); 90.1% of them were under 25 years old, 95.4% were single, and 27.4% reported being employed. All of them were studying in professional program (Administration: 39.5%; Accounting: 42%; Tourism and Business: 17.7%) at a private university located in northern Peru (Lambayeque region).

Instruments

Big Five Inventory-15p (BFI-15p; Dominguez-Lara & Merino-Soto, 2018a, 2018b). This is a brief version of the B5F: *Extraversion* (e.g., ...is talkative), *Agreeableness* (e.g., ...is generous), *Conscientiousness* (e.g., ...perseveres until the assignment is done), *Neuroticism* (e.g., ...often gets tense), and *Openness* (e.g., ...values the artistic and aesthetic) for Peruvian university students,

which has 15 items with five response options (*Strongly Disagree, Slightly Disagree, Neither Agree nor Disagree, Slightly Agree, and Strongly Agree*), with approximately three items for each dimension. The findings of the validation studies show that this is a version whose dimensions are properly differentiated from each other under the exploratory structural equation modeling (ESEM), obtaining at the same time relevant reliability indicators considering the number of items per dimension (Dominguez-Lara & Merino-Soto, 2018a, 2018b).

Emotional Exhaustion Scale (EES, Fontana, 2011). The adapted version for Peruvian university students was used (Dominguez-Lara, Fernández-Arata, Manrique-Millones, Alarcón-Parco, & Díaz-Peñaloza, 2018). It is a self-reporting scale that evaluates emotional exhaustion one-dimensionally, composed of 10 items (e.g., *There are days when I notice more fatigue and lack of energy to concentrate*) on a five-point response scale (*Rarely, Seldom, Sometimes, Often, and Always*).

Procedures

Authorization was requested from the university authorities to evaluate the students. The surveys were administered during regular class hours, with prior coordination with the teachers during the first weeks of the academic term. After signing the informed consent, the group questionnaire application procedure was followed by explaining the general and specific instructions. The study objectives, the voluntary nature of the participation, and the fact that it would not be rewarded were also emphasized. At the end of the evaluation, participants were thanked for their collaboration.

The principles of the Declaration of Helsinki (World Medical Association, 1964), as well as the Code of Ethics of the Colegio de Psicólogos del Perú (Peruvian Professional Association of Psychologists) (2017), were applied in this research. It should be noted that this work is a product derived from the project called *Relationship between Academic Burnout, Anxiety, and Depression in University Students: A Mediation Analysis of Protective and Risk Factors, approved by the third author's university*.

Data Analysis

Initially, a descriptive analysis of the data was carried out, considering values for skewness and kurtosis below two and seven, respectively, as a reasonable approach to univariate normality (Finney & DiStefano, 2006).

The α coefficient and the average inter-item correlation (r_{ii}) were used for scoring reliability. Since the BFI-15p evaluates broad constructs, with values around .60 and r_{ii} in the range of .15 to .20 are acceptable (Clark & Watson, 1995).

The sample was then divided by sex in order to find out the degree of association between emotional exhaustion and each personality trait in men and women to know if there is some kind of bias in the processing, and that the analysis of the whole group can be considered later. From an effect size (ES) approach, correlations (r) greater than .20 were assessed as significant (Ferguson, 2009). This is due to the intrinsic limitations of the null hypothesis statistical significance test, especially because of its sensitivity to sample size, resulting in evaluating small correlation values as significant.

Then, correlations were compared under a confidence interval (CI; Zou, 2007; Dominguez-Lara, Moscoso, Merino-Soto, & Navarro-Loli, 2016) and ES approaches using the q statistic (Cohen, 1992), expecting values $>.10$ to determine that there are differences between correlations. This way, it was possible to analyze a differential pattern of association based on sex.

To contrast the research hypothesis, a multiple regression analysis was carried out on the entire sample using three of the five personality traits (*extraversion, conscientiousness, and neuroticism*) as *predictors* and emotional exhaustion as the criterion. Since the reliability coefficients were low, mainly due to the characteristics of the evaluated construct and the number of items (Lang, John, Lütcke, Schupp, & Wagner, 2011; Rammstead, & Beierlein, 2014), the regression procedure contemplated the correction for attenuation of the correlations and the use of a bootstrap approach by using syntax in SPSS oriented to it (Lorenzo-Seva, Ferrando, & Chico, 2010).

The statistical assumptions for running the linear regression were analyzed preliminarily. Firstly, linearity was analyzed by exploring

the association between the variables; the independence of errors was evaluated with the value of the Durbin-Watson statistic, considering values between 1.5 and 2.5 to be acceptable; the distribution of the residues was analyzed with the Kolmogorov-Smirnov test; and, finally, the multi-linearity was analyzed with the *tolerance* indicators and the *variance inflation* factor (VIF), where values greater than .10 and lower than 10, respectively, are indicators of the absence of multicollinearity (Vilà Baños, Torrado-Fonseca, & Reguant-Álvarez, 2019).

In terms of results, they interpreted the coefficient of determination (R^2), which reflects the variance of the emotional exhaustion explained by the B5F and, if this was significant, the value of the standardized regression coefficients (β), and the structure coefficients (r_s), which are less affected by the collinearity between predictors and reflect more accurately the predictive capacity of these on the criterion variable were also measured (Courville, & Thompson, 2001). It should be noted that both R^2 and β were analyzed under an ES approach.

As for the R^2 , it was considered small (.02), medium (.13), and large (.26) (Ellis, 2010), also adding its CI; that is, if the lower limit of the R^2 's

CI is greater than .02, it is relevant. Finally, the $\beta > .20$ were significant (Ferguson, 2009), taking into account the CI in the same way as with R^2 . In general, all CIs were calculated with a bootstrap approach (number of replications: 500), valuing the statistic as significant if the CI does not include zero.

Results

Descriptive Analysis

The values for skewness (< 2) and kurtosis (< 7) indicate an approximation to normality (Table 1). The reliability indicators (α and r_{ii}) were acceptable for Extraversion ($\alpha = .520$; $r_{ii} = .265$), Agreeableness ($\alpha = .669$; $r_{ii} = .403$), Conscientiousness ($\alpha = .633$; $r_{ii} = .365$), Neuroticism ($\alpha = .619$; $r_{ii} = .351$), and Openness ($\alpha = .545$; $r_{ii} = .285$); and EE ($= .892$).

As for the correlations between the B5F and emotional exhaustion in men and women, significant values ($r = .20$) were obtained with *extraversion*, *conscientiousness*, and *neuroticism* in both groups (Table 1). But, both agreeableness and *openness* showed differences in their correlation with emotional exhaustion (q

Table 1
Descriptive, Distributional, Correlational, and Comparative Analysis

	Descriptive Analysis and Normality				Correlation between Predictors				Comparison of Correlations			
	M	DE	g_1	g_2	1	2	3	4	r_{women}	r_{men}	$ICr_m - r_v$	q
<i>Personality</i>												
1. Extraversion	11.409	2.238	-.684	.434	1				-.206	-.232	-.156, .204	.03
2. Agreeableness	12.731	2.028	-1.134	1.872	.461	1			-.067	-.202	-.052, .316	.13
3. Conscientiousness	12.067	2.169	-.748	.746	.419	.514	1		-.182	-.197	-.169, .196	.02
4. Neuroticism	8.171	2.816	.252	-.412	-.141	-.040	-.003	1	.408	.328	-.083, .247	.07
5. Openness	11.084	2.357	-.546	.094	.316	.439	.472	.039	-.157	.061	-.283, .091	.10
Emotional Exhaustion	23.495	8.413	.490	-.378					-	-	-	-

Note: M: Mean; SD: Standard Deviation; g_1 : Fisher's skewness coefficient; g_2 : Fisher's kurtosis coefficient; $ICr_w - r_m$: Confidence interval for the correlation difference; q : Cohen's q

> .10): in men, *agreeableness* showed a stronger association with emotional exhaustion, while *openness* showed a greater correlation in the group of women (Table 1), so they were not included in the following analysis.

Main Analysis

The evaluation of the assumptions to perform the multiple regression shows favorable evidence: linear association between variables (Table 1), acceptable Durbin-Watson statistic (1.956), reasonable approximation to normality by the residues ($Z = 1.438$; $p = .032$), and absence of multicollinearity in view of the values for *extraversion* (tolerance = .721; IVF = 1.387), *agreeableness* (tolerance = .628; VIF = 1.592), *conscientiousness* (tolerance = .632; VIF = 1.583), *neuroticism* (tolerance = .971; VIF = 1.030), and *openness* (tolerance = .717; VIF = 1.395).

Regarding the regression analysis, *extraversion*, *conscientiousness*, and *neuroticism* were found to significantly and moderately explain ($R^2 = .288$; CI95% .201, .401) the variability of EE, and only the individual prediction (β) of *neuroticism* was acceptable ($\beta = .480$; CI95% .339, .636), while *extraversion* ($\beta = -.063$; CI95% -.385, .311) and *conscientiousness* ($\beta = -.154$; CI95% -.503, .137) do not significantly predict academic burnout since their CIs include zero. However, a different picture emerges when considering r_s , because the three personality traits significantly predict emotional exhaustion: *neuroticism* ($r_s = .925$; CI95% .814, .982), *extraversion* ($r_s = -.550$; CI95% -.727, -.277), and *conscientiousness* ($r_s = -.378$; CI95% -.535, -.168).

Discussion

Burnout is a phenomenon that can have consequences in the academic, social, and personal spheres (Caballero et al., 2010). In addition, it has been reported that there are personality factors, such as *neuroticism*, that predispose one to experience academic burnout. Therefore, since no studies in this line of research have been conducted in the Peruvian context, this study aims to identify which of the B5F significantly predicts academic burnout.

The study hypotheses got empirical support and although at first the associations between emotional exhaustion and *extraversion* and *conscientiousness* were acceptable ($\approx .20$), the multivariate analysis performed later on showed that their predictive capacity of emotional exhaustion is almost null in the presence of *neuroticism*. However, when using a method more appropriate for the case of relational predictors (e.g., r_s), the associations initially proposed were supported. That is, if β is not significant and r_s is significant, it is because the predictor explains part of the criterion variable variance, but other predictor variables take credit (Stellefson, Hanik, Chaney, & Chaney, 2008). This could be explained by the association between the B5F (predictors) since they are not independent, but rather share relevant variance. For example, there is usually a direct association between four of the B5F, except for neuroticism, with which the other dimensions are negatively associated (for a summary, see Dominguez-Lara, Merino-Soto, Zamudio, & Guevara-Cordero, 2018). This is also seen in Peruvian studies with the BFI-15 (Dominguez-Lara & Merino-Soto, 2018b). Thus, a different picture could be established if the predictors were independent, but the complexity inherent in the personality construct is evidence to the contrary.

The results of this research are consistent with those reported in other areas (García-Izquierdo et al., 2009; Langelaan et al., 2006; Morgan, & De Bruin, 2010; Sulea et al., 2015), which conclude that the neuroticism factor is associated to a greater degree with the burnout syndrome. This can be explained within the personality cognitive-affective system (Mischel & Shoda, 1995), since high levels of neuroticism are associated with the tendency to select and experience events that predispose one to experience negative emotions (Costa & McCrae, 1992; Emmons, Diener, & Larsen, 1985), causing the environment to be evaluated as threatening (Langelaan et al., 2006) and circumstances in which there are no resources to deal with such situation, as well as an overload. In other words, if a student is unable to functionally cope with personal or academic adversities, and if he or she has high levels of neuroticism, he or she is more likely to experience increased emotional exhaustion, develop academic burnout, and

subsequently experience anxiety or depression (Caballero et al., 2010; Escuderos et al., 2017).

On the other hand, the inverse association with extraversion and conscientiousness would indicate that it is relevant for students to socialize with their peers and have a supportive social network (extraversion), as well as a disciplined academic life (conscientiousness) to prevent emotional exhaustion. The first one has already been observed in work environments where the link with colleagues minimizes the impact of burnout at work (Beltrán, Moreno, & Reyes, 2004), which can be extended to the academic field (Kim, Jee, Lee, An, & Lee, 2018). The second one shows that the organization of tasks and their completion within the established timeframe would minimize the possibility of accumulation and, consequently, of emotional exhaustion.

The results have practical relevance when planning the evaluations at the beginning of the term in universities. Identifying students who have higher levels of neuroticism, as well as lower levels of extraversion and conscientiousness, could help evaluate them in a more detailed manner and, therefore prevent the occurrence of academic burnout and its consequences. From a theoretical point of view, the information hereby provided covers a gap in the Peruvian psychological research, which will make it possible to broaden it by using more sophisticated analysis methods, as well as the inclusion of a greater number of variables within the framework of explanatory models.

Among the limitations of this study, we can highlight the use of a short scale to evaluate personality (Dominguez-Lara & Merino-Soto, 2018a). Although it may provide low indicators of scoring reliability, those are acceptable in terms of the extent of the construct evaluated. Also, an analytical method was used considering this situation. Additionally, given the importance of the three evaluated traits, future research could evaluate it with the extended version of the instrument. Besides, in the absence of a follow-up evaluation, it is not possible to conclude on the predictive power of the *neuroticism*, *extraversion*, and *conscientiousness* personality traits on the genesis and maintenance of EE (e.g., Armon et al., 2012). Therefore, it would be convenient to

implement longitudinal studies, given the stable nature of the measure of emotional exhaustion used in this study. In favor of the research, it should be noted that the instruments were applied in the first weeks of class during the first semester of the year, so it is unlikely that there would be any interference that could occur if the evaluation had been scheduled for the end of the year. Also, it is assumed that the level of demand among the professional programs is similar, since they all belong to the of economic-business group, so it does not represent a limitation either.

In conclusion, *neuroticism*, *extraversion*, and *conscientiousness* significantly predict emotional exhaustion in university students, which provides further insight for an evaluation focused on these traits, considering that poor stress coping carries harmful consequences for psychological health (Caballero et al., 2010).

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