

Academic satisfaction at university: the relationship between emotional intelligence and academic engagement

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Abstract

Introduction. The present study examined the mediating role of academic engagement in the relationship between emotional intelligence and academic satisfaction when controlling for sociodemographic variables and other classic constructs such as conscientiousness and personality traits.

Method. The sample included 203 university students (140 women, 63 men) from the University of Deusto, with ages ranging from 18 to 27 years. For the analysis, bootstrap methods were used to explore multiple mediator effects.

Results. Results of the study revealed that emotional intelligence was positively associated with academic satisfaction in the sample of university students. Moreover, the final model showed total mediation of academic engagement in the relationship between emotional intelligence and academic satisfaction, even controlling for sociodemographic and personality trait variables.

Conclusion. This study represents one of the first attempts to investigate the mediating effect of academic engagement in the relationship between emotional intelligence and academic satisfaction, controlling for sociodemographic variables and conscientiousness in a sample of university students. Our findings suggest an underlying process in the relationship between emotional intelligence and academic satisfaction. Finally, limitations of the results and implications for future research are discussed.

Keywords: Emotional intelligence, academic satisfaction, academic engagement, conscientiousness, university students.

Resumen

Introducción. El presente estudio examinó el efecto mediador del engagement académico en la relación entre inteligencia emocional y satisfacción académica controlando variables sociodemográficas y otros constructos clásicos como el rasgo de personalidad de conciencia.

Método. La muestra estuvo compuesta por 203 estudiantes (140 mujeres, 63 hombres) de la Universidad de Deusto con edades comprendidas entre 18 y 27 años. Para el análisis de datos se realizó el análisis bootstrapping para corroborar la existencia de los efectos múltiples de mediación.

Results. Los resultados obtenidos indicaron que la inteligencia emocional se asocia significativamente a la satisfacción académica de los estudiantes universitarios. Además, el modelo final mostró una mediación completa del engagement académico en la relación entre inteligencia emocional y satisfacción académica, incluso una vez controladas tanto las variables sociodemográficas como de personalidad.

Discusión y conclusiones. El presente estudio supone uno de los primeros trabajos desarrollados en una muestra de estudiantes universitarios en los que se analiza el efecto mediador del engagement académico en la relación entre inteligencia emocional y satisfacción académica controlando variables sociodemográficas y de rasgos de la personalidad. Así, los hallazgos del presente estudio sugirieron un proceso subyacente en la relación entre inteligencia emocional y la satisfacción académica. Finalmente, se discuten las limitaciones e implicaciones de los resultados obtenidos.

Palabras clave: Inteligencia emocional, satisfacción académica, engagement académico, conciencia, estudiantes universitarios

Introduction

University students' degree of satisfaction has sparked growing interest ever since the UNESCO pointed to students and their needs as the key focus for pursuing educational quality in its World Declaration on Higher Education for the Twenty-first Century (UNESCO, 1998). This has led to multiple research studies that have focused their attention on life satisfaction (Huo & Kong, F., 2014; Jonker, Koekemoer & Nel, 2015) as well as on work satisfaction (Lent & Brown, 2006). However, due to students' lack of connection to the world of work, the importance given to work satisfaction has tapered off, and academic satisfaction has taken a place of priority (Lent, Singley, Sheu, Schmidt & Schmidt, 2007).

Furthermore, several studies have reinforced the positive value of academic satisfaction, defining this variable as a facilitating factor in the teaching-learning process and in subsequent academic and work performance (De Vos & Soens, 2008; Ojeda, Flores & Navarro, 2011; Park, 2011). Among the different aspects associated with academic satisfaction, we underscore the importance of the personal component, in the students themselves (González, 2014). Thus, emotional intelligence is among the more relevant and fundamental factors, as it predicts greater satisfaction in the academic sphere, and lower drop out (Salanova, Martínez, Bresó, Llorens & Grau, 2005).

Emotional intelligence and academic satisfaction

Emotional intelligence has been the object of much debate in the research, owing to controversy about its conceptualization and measurement (Mayer, Roberts & Barsade, 2008). The construct has been viewed through the lens of different models, resulting in very diverse approaches to the concept (Bar-On, 1997; Salovey & Mayer, 1990; Petrides & Furnham, 2003). One of the most widely-accepted models in the scientific community is that of Mayer and Salovey (1997) who define emotional intelligence as the ability to perceive, assimilate, understand and regulate one's own emotions and those of others (Mayer & Salovey, 1997).

In the sphere of higher learning, emotional intelligence has been linked to such fundamental aspects as academic success (Saklofske, Austin, Mastoras, Beaton & Osborne, 2012), social relations (Lopes, Salovey & Straus, 2003; Martin-Raugh, Kell & Motowidlo, 2016), study fatigue (Brown & Shutte, 2006) and subjective wellbeing (Kong, Zhao & You,

2012), as well as others. Although relationships have been correctly established between emotional intelligence and the above-mentioned aspects of university students' wellbeing and academic success, there is a need to look further into the internal feelings of academic satisfaction in order to better address academic-professional challenges (Boyd, 2002).

Academic satisfaction in higher education is understood as part of the process of pursuing a degree, where this process refers to the accumulation of all experiences related to one's degree program (Rothwell & Arnold, 2007). Although few in number, certain studies demonstrate that a higher level of emotional intelligence is positively related to more perceived academic satisfaction (Holt, 2007; Salanova et al., 2005). Notwithstanding, evidence is lacking as to potential mechanisms that may intervene in this relationship.

Emotional intelligence, academic engagement and academic satisfaction

One of the possible mechanisms that may mediate the relationship between emotional intelligence and academic satisfaction is academic engagement. Academic engagement is defined as a state of psychological well-being comprising three dimensions (vigor, dedication and absorption) of intrinsic commitment toward studies (Parra & Pérez, 2010). Vigor, on one hand, is understood as the will to devote effort to a specific action and to persist in the face of difficulties; dedication is characterized by involvement in the task, and the experience of pride and enthusiasm therein; finally, absorption refers to concentration and immersion in the action itself. Some studies have found that academic engagement produces positive effects in different academic factors, such as improved academic achievement (Kuh, Cruce, Shoup & Kinzie, 2008; Reyes, Brackett, Rivers, White & Salovey, 2012), the accumulation of social capital (Harper, 2008) and one's adaptation to the university (Kuh, Palmer & Kish, 2003). Similarly, several studies have shown that students who present greater levels of academic engagement, and who are therefore more involved in their process of university study, present greater persistence throughout their degree program and ultimate graduation (Bridges, Cambridge, Kuh & Leegwater, 2005; Pascarella & Terenzini, 2005; Tinto, 2005).

Finally, studies performed with university students have shown significant relationships between emotional intelligence and academic engagement, even when controlling for classic predictors such as gender and age (Durán, Extremera, Rey, Fernández-Berrocal & Montalbán,

2006; Extremera, Durán & Rey, 2007). Emotionally intelligent persons have more clarity about their degree program and manifest academic behaviors that facilitate both persistence and engagement (Drummond, 2014).

Despite the importance of these results, there are no studies to date that examine the mediating effect of academic engagement in the relationship between emotional intelligence and academic satisfaction, controlling for certain personality traits such as conscientiousness. Conscientiousness is a personality trait within the Big Five model, focusing on individual difference in the degree of organization, persistence and motivation in goal-oriented behaviors (Costa & McCrae, 1992). Several studies, such as the meta-analysis from Poropat (2009), have demonstrated that conscientiousness has effects comparable to intelligence in regard to academic performance. In this way, a student with a high level of conscientiousness is more committed to his or her studies, and is willing to make a greater effort to reach study goals, thereby attaining greater academic satisfaction (McIlveen, Beccaria & Burton, 2013).

Objectives and hypotheses

Using prior research as our basis, the main aim of the present study was to analyze the mediating effect of academic engagement in the relationship between emotional intelligence and academic satisfaction, after controlling for prior levels of conscientiousness, gender, and age. In this context, and based on prior empirical evidence, emotional intelligence is expected to be positively related to academic satisfaction, and academic engagement will act as a mediator in the relationship between emotional intelligence and academic satisfaction, even when other classic sociodemographic and personality variables are controlled.

Method

Participants

The sample was composed of 203 students (140 women, 63 men) from the University of Deusto, Spain. Ages ranged from 18 to 27 years ($M = 20.16$), and degree programs were distributed among the areas of Social and Legal Sciences (44.3%), Health Sciences (25.6%) and Arts and Humanities (30.1%). Students were enrolled at different stages of their degree,

with 44.3% in their first year, 7.9% were second-year students, 5.4% were third-year students, and 42.4% were in their fourth year.

Instruments

Emotional intelligence. The Spanish version of the *Wong and Law Emotional Intelligence Scale* (WLEIS; Wong & Law, 2002) was used. This self-report is composed of 16 items on a seven-point Likert-type scale, and assesses four sub-dimensions (self emotion appraisal, others' emotion appraisal, use of emotion, and regulation of emotion), as well as a total construct. On this occasion, the total emotional intelligence score was calculated, for its best suitability to the present study objectives (e.g. "I have good control over my own emotions"). The Spanish version of Wong and Law's Emotional Intelligence Scale showed satisfactory consistency in the present study, with a Cronbach Alpha of .91, in line with prior studies that used a Spanish sample (Rey, Extremera & Pena, 2016).

Academic satisfaction. The *Academic Major Satisfaction Scale* (AMMS; Nauta, 2007) was the instrument used to measure academic satisfaction. The 6-item measure uses a five-point Likert-type scale to analyze specific facets of student satisfaction (e.g. "I feel good about the major I have chosen"). In order to use the instrument in a Spanish population, a translation and back translation were carried out by native speakers of the two languages. The Cronbach alpha obtained in this sample for reliability of internal consistency was .91, consistent with previous research studies (McIlveen, Beccaria & Burton, 2013).

Academic engagement. Academic engagement was assessed using the abbreviated version of the *Utrecht Work Engagement Scale for Students* (UWESS-9; Schaufeli & Bakker, 2003), the *Escala de Engagement Académico* (UWES-S; Parra & Pérez, 2010). The instrument contains 9 items that measure the dimensions of vigor (e.g. "My tasks as a student make me feel full of energy), dedication (e.g. "I am enthused about my major") and absorption (e.g. "I am immersed in my studies"), all in reference to one's studies. Response options are presented in a six-point Likert format (0= never, 6= every day). The reliability index in this study was .89 for vigor, .91 for dedication and .81 for absorption.

Conscientiousness. In order to assess conscientiousness, we used the Spanish version of the short form of Goldberg's Bipolar Adjectives (Goldberg, 2012, García, Aluja & García, 2004). This questionnaire contains 25 items with pairs of adjectives, assessed on a nine-point Likert scale, and it assesses the factors of neuroticism, extraversion, openness, agreeableness, and conscientiousness, in line with the Big Five dimensions (Smith & Snell, 1996). In this case, the dimension of conscientiousness was used, in order to address the established study objectives. This dimension presented a Cronbach alpha of .87, similar to other studies where only this dimension was used (McIlveen, Beccaria & Burton, 2013).

Procedure

Students participated voluntarily by completing a multi-section, online questionnaire, approved in advance by the Ethics Commission of the University of Deusto. Questionnaire completion required approximately 20 minutes, and students were offered the possibility of receiving information on their own assessment profile once the process was finalized.

Data analyses

Descriptive statistics (mean, standard deviation and Pearson correlations) were calculated for the scales on emotional intelligence, academic satisfaction, self-efficacy in work and conscientiousness. In order to analyze how emotional intelligence affects academic satisfaction through work self-efficacy, we used the mediation procedure from Preacher and Hayes (2004). Level of significance was established at $p < .01$, and all the mediational analyses were carried out using the SPSS Macros provided by Preacher and Hayes.

A mediation analysis was carried out to evaluate the possible mediating role of engagement in the relationship between emotional intelligence and academic satisfaction. Due to the sample size of the present study, we followed the indications of MacKinnon, Lockwood and Williams (2004), using a nonparametric bootstrapping procedure with 5000 repetitions to estimate 95% confidence intervals and to analyze the indirect effect of emotional intelligence on academic satisfaction through the mediating variable. For a more complete mediation analysis, the effect of two classic sociodemographic covariables (age and gender) was controlled.

We followed the steps stipulated by Baron and Kenny (1986) to determine a theoretical mediation model. First, one must verify that there is a significant association between the predictor (emotional intelligence) and the dependent variable (academic satisfaction). Second, the predictor and the mediator (engagement) should be related. Likewise, the mediator must present a relationship with the dependent variable, after controlling for the effect of the predictor. Finally, once the effect of the mediator is introduced, the effect of the predictor on the dependent variable must be lower. If the effect of the latter drops below a significant level, we are dealing with total mediation; if, on the other hand, the level continues to be significant, it is considered a partial mediation.

Results

Descriptive results

Table 1 presents the means, standard deviations, reliabilities and correlations of the variables studied. By means of Pearson correlation coefficients, emotional intelligence was observed to be positively and significantly related to the degree of academic satisfaction, to the three dimensions of engagement (vigor, dedication and absorption), to conscientiousness and to age. Likewise, greater academic satisfaction was associated with greater vigor, greater dedication and greater absorption within the factor of academic engagement, and greater conscientiousness. As for the dimensions of academic engagement, they each showed a significant, positive relationship with each other and with the variable conscientiousness.

Table 1. Descriptive statistics and partial correlations between the instruments (n=203)

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---------------------------|--------|--------|--------|--------|--------|------|
| 1. Emotional intelligence | | | | | | |
| 2. Academic satisfaction | .306** | | | | | |
| 3. Vigor | .376** | .484** | | | | |
| 4. Dedication | .363** | .789** | .682** | | | |
| 5. Absorption | .407** | .623** | .754** | .772** | | |
| 6. Conscientiousness | .276** | .380** | .291** | .362** | .273** | |
| M | 5.15 | 4.41 | 3.78 | 4.91 | 4.24 | 6.60 |
| SD | 0.84 | 0.81 | 1.34 | 1.25 | 1.21 | 1.50 |
| A | .91 | .91 | .89 | .91 | .81 | .87 |

Note: ** $p < .01$

Emotional intelligence and academic satisfaction

As shown in Table 2, the direct effect of emotional intelligence on academic satisfaction did not reach significant levels, showing a value of .01. By contrast, when analyzing the relationship between emotional intelligence and engagement, significant levels were obtained, .51 ($p<.001$) for the vigor dimension, .42 ($p<.001$) for dedication, and .51 ($p<.001$) for absorption. As for the third condition, both the vigor dimension and the dedication dimension showed significant influence on academic satisfaction, with values of -.10 ($p<.05$) and .49 ($p<.001$), respectively. Finally, the indirect effect of the three dimensions of engagement lay between -.1120 and -.0092 in the case of vigor, .0935 and .3447 for dedication, and -.0178 and .1389 for absorption, with a 95% confidence interval. Therefore, since zero was not within the confidence interval for the dimensions of vigor and dedication, and the effect of the predictor had fallen below significant levels, we were able to recognize a total mediating effect of engagement in the relationship between emotional intelligence and academic satisfaction.

Table 2. Mediation analysis of the effects of emotional intelligence on academic satisfaction, through engagement, while controlling for conscientiousness, gender and age.

| DV | M | Effect of IV on M | Effect of M on DV | Direct effect | Indirect effect | CV on DV | BCa 95%CI | | Total effect |
|-----------------------|------------|-------------------|-------------------|---------------|-----------------|-------------------|-----------|--------|--------------|
| | | | | | | | Lower | Upper | |
| Academic satisfaction | | | | .01 | | | | | .21** |
| | Vigor | .51** | -.10* | | .03 | Conscientiousness | .06* | -.1220 | -.0092 |
| | | .42** | .49** | | .06 | | | | |
| | Dedication | | | | | Gender | .08 | .0935 | .3447 |
| | | .51** | .08 | | .04 | | | | |
| | Absorption | | | | | Age | .02 | -.0178 | .1389 |

Note: DV dependent variable, M mediator, IV independent variable, CV control variable, BCa bias corrected and accelerated. * $p<.05$; ** $p<.001$

Discussion

This research study represents one of the first attempts to examine the mediating effect of academic engagement in the relationship between emotional intelligence and academic satisfaction in university students. The results obtained here provide empirical evidence of the importance of emotional intelligence and academic engagement when predicting academic satisfaction. First, the present study found that greater emotional intelligence on the part of university students was positively related to both academic satisfaction and academic engagement, a finding consistent with previous studies in the literature (Extremera, Durán & Rey, 2007, Trógolo & Medrano, 2012; Oriol-Granado, Mendoza-Lira, Covarrubias-Aplabaza, Molina-López, 2017). Likewise, higher scores in academic engagement were positively associated with higher levels of academic satisfaction, also confirming findings from previous research studies (Wefald & Downey, 2009).

Regarding our *mediation analyses*, results indicated that levels of academic engagement totally mediated the relationship between emotional intelligence and academic satisfaction. It was thereby confirmed that students' academic satisfaction depends on the degree of academic engagement, while the latter is related to a person's ability to perceive, assimilate, comprehend and regulate their own emotions and those of others. These results may support the idea that university students who experience a pleasurable state of being immersed in their studies, and who are also committed and dedicated to these studies, are more satisfied with their academic experience (Caballero, Abello & Palacio, 2007). Likewise, the ability to take on studies as a positive challenge, to enjoy the activities involved, and to persist when faced with setbacks or difficulties, leads the student to a greater sense of wellbeing, better performance and greater satisfaction within the academic sphere (Gómez et al, 2015; Wach, Ruffing, Brünken & Spinath, 2016).

On the other hand, also in agreement with prior studies, results suggest that emotional intelligence in turn predicts academic engagement (Durán et al, 2006). This might be explained by the involvement of emotional processes in the aspects of academic vigor, dedication and absorption. In this sense, several research studies indicate that students with greater mastery of emotional abilities are more involved and more persistent in academic

studies (Clariana, Cladellas, Badia & Gotzens, 2011; Parker, Hogan, Eastabrook, Oke & Wood, 2006). Moreover, several authors refer to the ability to manage emotions as one of the best predictors of stress, where persons with better emotion management are those who deal better with stressful situations (Salovey, Rothman, Detweiler & Steward, 2000; Urquijo, Extremera & Villa, 2016). We might add that if emotions are not correctly perceived, assimilated, comprehended or regulated, our ability to manage active coping strategies is limited (Morales, 2017; Salovey, Stroud, Woolery & Epel, 2002). As for the decision of choice of major, emotional intelligence is one of the top predictors, suggesting that this capacity is a precursor of academic security (Di Fabio, Palazzechi, Asulin-Peretz & Gati, 2013). All of this may account for the positive relationship found between emotional intelligence and academic engagement.

Despite its important contributions, the study is not free of *limitations*. First, the subjects of our sample come from a single university; they are a convenience sample. To further advance in this field, future research should expand the source of the sample to different universities with different characteristics. Second, data were collected using an online method, which might limit the control over response. To avoid possible negative consequences, it would be useful to use a face-to-face dynamic for data collection. Another data concern is the use of self reports, which may be biased toward social desirability. Finally, the use of a transversal design limits the possibility of showing cause-effect inferences in the relationships. It would therefore be advisable for future research to make use of longitudinal and experimental designs, using a broader sample and different forms of assessment, such as performance measures or an interview format. To this we might add the use of different statistical analyses such as structural equation models, in order to use a maximum likelihood model.

Conclusions and practical implications

In any event, the present study responds to the need for further investigation of the role of emotions in the academic lives of students (Linnenbrink & Pekrun, 2011; Palomera, Fernández-Berrocal & Brackett, 2008; Paoloni, 2014, Thomas, Cassady & Heller, 2017). Reality in higher education has been undergoing change since 1999 when the Bologna Declaration laid the foundations for building a European Higher Education Area (EHEA),

based on reorganization of knowledge, the appearance of new expectations, internationalization of education, and a closer, real connection between business and university. Within this construction of a new vision of higher learning, special emphasis is given to not limiting ourselves to merely academic and cognitive knowledge, but developing other skills such as emotional intelligence in order to be capable of facing new challenges of adaptability. The desire for a real connection between university and the professional sphere leads us to modify higher education toward attaining real skills for meeting these new challenges. In this way, the present study offers evidence of the importance of equipping students with essential tools for adapting both to a university program and to their later vocational placement, and clarifies the importance of emotional intelligence and aspects of positive psychology, like academic engagement, in higher learning.

Finally, given that different studies argue that emotional intelligence may be modified through programs and experiences (Dacre-Pool & Qualter, 2012; Di Fabio & Kenny, 2011; Sarrionandia & Garaigordobil, 2017), the results of this study reinforce the idea of considering interventions in emotional intelligence, with an aim to improve engagement through programs that help strengthen academic satisfaction. In conclusion, implementation of such programs might have positive implications toward decreasing school drop out, as well as reinforcing motivation and involvement in one's studies, always focusing teaching toward its application in a professional career and toward improved academic wellbeing in university students.

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