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RESEARCH PAPER

Emotional intelligence of the teacher and academic satisfaction of the university student

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Abstract

In the XXI century, the university professor has become a mediating agent between the student and knowledge; in addition, the personal and professional skills of university professors are actively involved in student learning. The purpose of the research was to know the relation between the emotional intelligence of university professors (Bar-On model) and the academic satisfaction of university students, seen as part of the psychological well-being (eudaimonic position). The research was correlational and transversal. Emotional intelligence was assessed to 87 professors and information on academic satisfaction was collected from 597 students. The results indicated that the study variables correlate positively (.80), being the interpersonal component which has the highest correlation coefficient with the academic satisfaction. Furthermore, it was observed that 91% of professors obtained average and high levels of emotional intelligence; female professors obtained higher scores than male professors, but the differences were not significant. Additionally, professors over 45 years old showed greater development of emotional skills and greater academic satisfaction from the students.

Keywords: Emotion; satisfaction; higher education; university professor; university student

Inteligencia emocional del docente y satisfacción académica del estudiante universitario

Resumen

En el siglo XXI, el docente universitario se ha convertido en un agente mediador entre el estudiante y el conocimiento; además, las habilidades personales y profesionales del docente participan activamente en el aprendizaje del estudiante. El propósito de la investigación fue conocer la relación entre la inteligencia emocional del docente (modelo de Bar-On) y la satisfacción académica del estudiante universitario, vista como parte del bienestar psicológico (posición eudaimónica). La investigación fue correlacional. Se evaluó la inteligencia emocional de 87 docentes y se recogió información sobre la satisfacción académica de 597 estudiantes. Se encontró que existe correlación positiva entre las variables de estudio (.80), siendo el componente interpersonal el que obtuvo mayor coeficiente de correlación con la satisfacción académica. Además, se observó que el 91% de

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los docentes obtuvo niveles promedio y alto de inteligencia emocional; las docentes mujeres presentaron mayor puntaje en esta variable que los varones, aunque las diferencias no fueron significativas. Adicionalmente, los docentes de 45 años a más mostraron mayor desarrollo de habilidades emocionales y mayor satisfacción académica por parte de los estudiantes.
Palabras clave: Emoción; satisfacción; enseñanza superior; profesor de universidad; estudiante universitario

Inteligência emocional do professor e satisfação acadêmica do estudante universitário

Resumo

No século XXI, o professor universitário tornou-se um mediador entre o aluno e o conhecimento; Além disso, as habilidades pessoais e profissionais dos professores universitários estão ativamente envolvidas na aprendizagem dos alunos. O objetivo da investigação foi conhecer a relação entre a inteligência emocional de professores universitários (modelo Bar-On) e a satisfação acadêmica de universitários, vistos como parte do bem-estar psicológico (posição eudaimônica). A investigação foi correlacional e transversal, a inteligência emocional foi avaliada em 87 professores e informações sobre a satisfação acadêmica foram coletadas em 597 alunos. Os resultados indicaram que as variáveis do estudo se correlacionam positivamente (0,80), sendo o componente interpessoal o de maior coeficiente de correlação com a satisfação acadêmica. Além disso, observou-se que 91% dos professores obtiveram níveis médios e altos de inteligência emocional; as professoras obtiveram escores mais altos que os professores homens, más as diferenças não foram significativas. Além disso, professores com mais de 45 anos apresentaram maior desenvolvimento de habilidades emocionais e maior satisfação acadêmica por parte dos estudantes.
Palavras chave: Emoção; satisfação; ensino superior; professor; universidade estudante

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In the traditional teaching paradigm, the teacher was considered the owner of knowledge, but globalization and the new millennium made possible a reconfiguration in the educational dynamic: the student became the protagonist and the center of the teaching-learning process at all educational levels. The twenty-first-century university professor must master specific topics in their area, know the cultural context of the subject, and be familiar with didactic strategies, programming, as well as evaluation types and instruments. Also, the role they plays must be focused on learning and not so much on teaching (Monereo & Pozo, 2003), and they must move away from "teaching a class" and towards generating meaningful learning experiences and creating emotionally safe and adequate environments to develop their students' skills.

The teacher must do all this without neglecting research tasks.

The professors' success is not only due to their mastery of content and strategies, but also to their ability to adapt and take into account the students' needs (Almiron & Porro, 2014). Cognitive skills are an important factor in university education, but the transcendental role of emotions and feelings should not be overlooked (García-Rangel, García, & Reyes, 2014). On the other hand, Golombek & Doran (2014), in a research on teacher training, showed that emotions are linked to teaching outcomes. Another study found that future teachers recognize the importance of emotions, arguing that they have an impact on learning, the environment, and the methodologies used (Buitrago, Avila, & Cárdenas, 2017).

The effectiveness and quality of the teaching

process are related to the teacher's social and emotional competences (Pertegal-Felices, Castejón-Costa, & Martínez, 2011). The socio affective competencies expected from a teacher are self-knowledge, emotional self-regulation, display of emotions, self-esteem, empathy, among others (Fernández, Palomero, & Teruel, 2009). For example, Carcausto (2016) and Contreras & Dextre (2016) found that teachers exhibit average levels in the development of emotional skills. On the other hand, it has been shown that the emotional aspects of teachers affect their daily performance and student learning (Jennings & Greenberg, 2009; Thomson & Palermo, 2014). High levels of emotional skills allow appropriate environments for effective learning (Palomera, Briones, & Gómez-Linares, 2017). Emotion management in teachers influences their physical and mental health, as well as their work performance (Peñalva, López, & Landa, 2012). Emotional intelligence was considered to be an insignificant aspect of social life until the end of the 1980s (Maidana & Samudio, 2018), but thanks to the contributions of Thorndike (Social Intelligence), Wechsler (evaluation of non-intellectual factors), Leeper (emotional thinking), McClelland (with a new way of predicting success and work performance), and Gardner (multiple intelligences), the construction of a proposal in which non-cognitive skills are an important part of the process of social interaction began. Salovey & Mayer, at the beginning of the 1990s, gave meaning to the Emotional Intelligence construct (Palomera, Fernández-Berrocal, & Brackett, 2008), but it is Goleman who allows its diffusion in the scientific, business, and educational fields (Maidana & Samudio, 2018).

There are several models that study Emotional Intelligence. However, Reuven Bar-On's proposal is categorized as a mixed model that considers emotional abilities and the person's own traits. Emotional intelligence comprises a varied set of skills that allows the individual to adequately respond to the demands of the environment (Bar-On, 1997). These non-cognitive skills are grouped into five components: intrapersonal, interpersonal, adaptability, stress management, and overall mood. This multifactorial model is related to the potential for success: emotional skills directly influence people's well-being and develop as we age (Abanto, Higueras, & Cueto, 2000; Bar-On, 2006).

Brasseur, Grégoire, Bourdu, & Mikolajczak (2013) found that emotional skills (especially intrapersonal) correlate positively with age. Luque-Reca, Augusto-Landa, & Pulido-Martos (2016) reported high levels of Emotional Intelligence in older adults, and Sharma (2017) explained that total Emotional Intelligence increases with age, but recommends implementing training activities in adulthood to enhance the development of emotional skills. In terms of gender, women show greater development of these skills compared to their male peers (Borsic & Riveros, 2017; Danvila & Sastre, 2010; Mandell & Pherwani, 2003; Sánchez, Fernández-Berrocal, Montañés, & Latorre, 2008).

On the other hand, "feeling good" is an aspect of life that has been reflected upon throughout history, but the scientific interest in studying well-being is recent and takes on importance due to its effects on health, social relations, academic performance, among others (Novoa & Barra, 2015). The study of well-being is based on two perspectives: hedonia and eudaimonia, both with different philosophical origins. The hedonic perspective relates well-being to enjoyment and happiness, to pleasant experiences, or also, to a balance between positive and negative stimuli. From the eudaimonic perspective, well-being goes beyond personal happiness; it refers to daimon, understood as human potential. From this perspective, what is interesting to see is what the person does or thinks, and not so much how they feel (Lent, 2004).

In practice, these philosophical traditions seem to overlap and have allowed the development of various studies and publications on subjective and psychological well-being (Keyes, Shmotkin, & Ryff, 2002). The subjective well-being refers to what people feel about their lives and the pleasure for their existence, whereas the psychological well-being is related to valuing aspects that allow the development of one's potential (Barrantes-Brais & Ureña-Bonilla, 2015). The model of psychological well-being is based on the assumption that subjects strive to improve their skills and develop their talents; its evaluation includes the assessment of quality social relationships and sense of growth and development (Gallagher, Lopez, & Preacher,

2009). Hedonic and eudaimonic dimensions often have a moderate to high correlation (Ryff & Keyes, 1995), so well-being should be studied as a multidimensional phenomenon; this is evident when a person feels happy in the face of challenging activities (Lent, 2004).

Satisfaction, from a holistic point of view, is the final product of the set of experiences that a person has (Lounsbury, Park, Sundstrom, Williamson, & Pemberton, 2004) and can be conceptualized as the psychological well-being (eudaimonic vision) that is obtained by comparing the objectives achieved with the initial expectations, that is, it is related to the search and achievement of personal aspirations (Medrano & Pérez, 2010). In accordance with the above, the experiences offered by the university (academic, physical, spiritual, and social) become a direct reference to evaluate the student's satisfaction (Inzunza et al., 2015).

The student feels satisfied when they sees that his or her expectations were met or exceeded (González-Peiteado, Pino-Juste, & Penado-Abilleira, 2017). Therefore, the educational process, the interaction with the professor, and the set of services available on campus are elements that the student evaluates when elaborating their opinion about the university. As can be seen, student satisfaction has various facets of analysis, being academic satisfaction one of the most important.

Academic satisfaction can be explained as the pleasure, enjoyment, or delight the student feels for his academic tasks within a program with which he identifies and seeks to develop his skills (Bernal, Lauretti, & Agreda, 2016). Academic satisfaction has become a fundamental aspect when evaluating the adaptation process, the permanence index, the sense of well-being, and the percentage of university graduates (Merino-Soto, Dominguez-Lara, & Fernández-Arata, 2017). It has been observed in engineering students that the desire to remain in the same program and complete it is related to goal achievement and academic satisfaction (Lent, Singley, Sheu, Schmidt, & Schmidt, 2007).

To determine the students' satisfaction, it is necessary to study the role of the teacher (Baños, Ortiz-Camacho, Baena-Extremera, & Tristán-Rodríguez, 2017) and pay attention to the interpersonal bonds between them (Bernal et al., 2016). As this interaction configures an integrated system of human bonds so complex that it is not limited to the cognitive level, emotional skills (empathy, problem solving, flexibility, tolerance, optimism, confidence, among others) constitute an interesting aspect of the educational process to be studied and that, according to previous analysis, must be shown by university professors in order to provide rewarding learning experiences. On the other hand, academic satisfaction has become a variable that, over the years, has gained relevance in research conducted in Latin America, in countries such as Brazil, Chile, Argentina, and Peru, since its analysis can lead to a better understanding of student well-being.

As the student is the center of the educational process, the teacher is a fundamental part in the learning and fulfillment of expectations, and emotional skills play a remarkable role in teacher-student interaction; it is proposed as a hypothesis that the teacher's Emotional Intelligence influences the levels of academic satisfaction. Therefore, the main objective of this research was to determine the relationship between the professor's Emotional Intelligence, according to the Bar-On approach, and the level of academic satisfaction of university students. In addition, it was proposed to study Emotional Intelligence and academic satisfaction according to the professors' sociodemographic characteristics: sex, age, and the school in which they teach.

Method

Design

This research falls under the quantitative approach. Likewise, the study design was non-experimental, of a correlational type.

Participants

Two groups were evaluated: one formed by professors and the other, by students from different programs in a private university in Lima, Peru. The professors were selected through a convenience sampling, which allows for the

selection of participants according to their accessibility and proximity to the researchers (Hernández, Fernández, & Baptista, 2014). For the professor sample, the inclusion criteria were (1) to be working one semester at the university, (2) to be teaching the first two years of a program, and (3) to participate voluntarily. A sample of 87 professors with an average age of 43.42 years (SD=6.07) was obtained, composed of 58,6% women and 41.4% men. Sixty point nine percent (60.9%) were from the School of Humanities (Communication and Psychology), whereas 39.1% were from the School of Engineering (Civil Engineering, Systems Engineering, and Industrial Engineering).

Regarding the second group, the sample was made up of first and second-year students enrolled in the courses taught by the professors who agreed to participate in the study. As in the professors group, student participation in the research was voluntary. The group consisted of a total of 597 currently enrolled students with regular attendance, with an average age of 20.40 years (SD=2.05). Regarding gender, this sample

Included 49% of women and 51% of men; 54% belonged to the School of Humanities, whereas 46%, to the School of Engineering.

Instruments

To measure the Emotional Intelligence variable, the version adapted to the Peruvian context of the Bar-On Emotional Quotient Inventory (EQ-i) instrument was used, translated into Spanish as *Inventario de Cociente Emocional de Bar-On* (ICE). This adaptation was done by Abanto et al. (2000), on a sample of 1,246 people (59.1% men and 40.9% women) from different socioeconomic levels and whose ages were recorded as from 16 years old. This version of the instrument consists of 133 items grouped into five components. All items had five-response alternatives from 1 = "It is rarely or never my case, to 5= It is very often or always my case". In addition, the instrument has a measurement scale that allows to interpret the scores obtained as "level of development" from Peruvian scales (see Table 1).

Abanto *et al.* (2000) explain that, as part of the development of the Bar-On EQ-i, this instrument was subjected to different validity tests. In order to determine the structural validity of the instrument, a factor analysis was carried out, showing equilibrium in the factor structure 1 - 5 - 15 (total EQ - composite scales – subscales).

Likewise, an adequate convergent validity has been demonstrated by correlating the scale with constructs such as coping with stressful situations, work performance, and job satisfaction. Similarly, divergent validity was corroborated by correlating the Bar-On EQ-i with constructs such as self-esteem, submission, conformity, instability, carelessness, etc. Furthermore, through discriminant validity, it was shown that the EQ-i can evaluate and demonstrate differences between people who manage their Emotional Intelligence and those who have not developed it. In order to use the adapted version of the Bar-On EQ-i, this research reviewed the reliability of the scores through the internal consistency of the scale and its dimensions. In Table 2, the Alpha coefficients

Table 1

Emotional Intelligence: Components and Interpretative Pattern

Variable	Components	Levels
Emotional Intelligence	Intrapersonal Component Interpersonal Component Adaptability Component Stress Management Component General Mood Component	130 to + (Markedly high) 120 - 129 (Very high) 110 - 119 (High) 90 - 109 (Average) 80 - 89 (Low) 70 - 79 (Very low) Below 70 (Markedly low)

obtained can be seen, which indicate that the scores produced by the instrument are highly reliable.

The second instrument measures academic satisfaction. The original version was made to measure satisfaction in Brazilian university students (Sisto et al., 2008). This scale was made up of 35 items grouped into four dimensions: perception of the teaching environment, perception of affectivity, perception of the physical environment, and perception of social adjustment. The responses were recorded through a four-option Likert scale: "never" (0) to "always" (3), where a higher score indicates greater satisfaction. The validity of the construct was demonstrated through factor analysis and the internal consistency indexes were calculated, where the following Alpha coefficients were obtained: .86 (full scale), .87 (perception of teaching environment), .76 (perception of affectivity), .73 (perception of physical environment), and .72 (perception of social adjustment).

Later, Medrano & Pérez (2010) adapted to Spanish the perception dimension of the teaching environment in Argentinian university students. These authors decided to work with this dimension for two reasons: the first reason was empirical, since it is the factor that explains the highest variability of the instrument (15.1%). The second reason was theoretical, since the items that make up the scale of satisfaction with teaching environment are more congruent with Lent's proposal in 2004. In this adaptation, 251 students from different programs participated, and studies of construct validity and internal consistency were carried out using exploratory factor analysis and Alpha coefficient, respectively. The results obtained suggested a one-dimensional internal structure composed of eight items that explained 49% of the response variability, as well as a high homogeneity (α = .84) of the scale.

For this research, changes were made to the wording of items 3 and 7, from "I like my professors" to "I like my professor" and "professors are open to dialogue" to "The professor is open to dialogue." These modifications were made in order to focus the evaluation of academic satisfaction on the pedagogical environment created by the evaluated professor. In order to demonstrate construct validity, an exploratory factor analysis was performed where the Kaiser Meyer-Olkin (KMO) measure of sampling adequacy obtained an adequate value of .849. In addition, Bartlett's test of sphericity was significant (X^2= 756.739; $p \leq .001$); these results showed that the basic conditions for continuing the analysis were met. Subsequently, factor extraction was performed using the maximum likelihood method with Oblimin rotation. After this, it was confirmed that the eight items of the instrument are grouped into a single dimension that explains 31% of the variance in the responses, with factor loads of the items ranging between .51 and .60. Concerning reliability, the present study obtained an Alpha coefficient of .78 (with 95% confidence intervals from .74 to .81). This result indicates that the scores are reliable.

Table 2

Reliability Index of EQ-i and its Components

Scale	α	IC 95%	
		Li	Ls
General scale	.95	.93	.97
Intrapersonal Component	.88	.84	.92
Interpersonal Component	.81	.74	.87
Adaptability Component	.80	.73	.86
Component of Stress Management	.76	.68	.83
General Mood Component	.77	.69	.84

Note: *Ll: Lower limit of the alpha coefficient, Ul: Upper limit of the alpha coefficient*

Procedures

EQ-i was applied to professors two weeks before the end of the semester. The application of the scale was done by the researchers, who handed in the printed questionnaire along with the informed consent. It took an average of 42 minutes per person to fill out both documents. The total population consisted of 98 teachers, four of whom expressly refused to participate in the research. The instrument was applied to a total of 94 teachers. However, only 87 met the criteria for validity of the Bar-On EQ-i test (index of inconsistency, negative impression, positive impression, and item 133 of general validity), representing 88.8% of the population.

On the other hand, the application of the instrument that measures academic satisfaction in students was carried out during the last two weeks of the semester, in which the last 15 minutes of classes were granted to explain the objective of the research and to ask if they wanted to participate voluntarily. If they agreed, the researchers handed in the printed questionnaire along with the informed consent. This allowed for a sample of 597 students. The application of the academic satisfaction scale took approximately six minutes per student.

Data Analysis

Due to the nature of the research, the average of the student's academic satisfaction variable was calculated for each professor. In this way, each participating professor obtained two grades: one for the Emotional Intelligence variable and the other for the academic satisfaction variable.

The statistical package SPSS v.22 was used to carry out the relevant statistical analyses. First, the normality test was carried out on the distributions of scores by scales, subscales, and socio-demographic characteristics. The Kolmogorov-Smirnov test was used for the total scores, whereas the Shapiro-Wilk test was used for the scores divided by the sociodemographic characteristics of the professors. With these tests, a lack of normality was reported in some subscales, therefore, the indices of asymmetry and kurtosis were analyzed, which were lower than 3 and 10, respectively. This allowed to point out that the data distributions were within an adequate range (Kline, 2011) and the corresponding parametric analyses could be executed.

In order to respond to the main objective of the research, the Emotional Intelligence of the professor was correlated with the average academic satisfaction of the student in relation to the professor evaluated. In this way, two scores per professor were obtained, which allowed the correlational analyses to be carried out using the Pearson coefficient r. The average per professor of the students' academic satisfaction was also correlated with the sociodemographic characteristics of the professor by means of the point biserial correlation coefficient. Mean comparisons were made using the t Student statistic for Emotional Intelligence and student academic satisfaction per professor according to the sociodemographic characteristics of the educator. Likewise, single factor ANOVA was used to compare academic satisfaction according to the professor's Emotional Intelligence level.

Results

The average Emotional Quotient (EQ) of professors was found to be at an average level (between 90 and 109) according to the interpretative guidelines of the Bar-on EQ-i adaptation to the Peruvian context (Abanto et al., 2000). Table 3 shows that 91% of the professors evaluated are at the average, high, and very high levels. This indicates that most subjects' emotional capacity is between adequate and well -developed. Table 4 presents the main descriptive measures of general Emotional Intelligence scores and their dimensions. It is observed that, in all cases, the average scores are above 100.

To answer the main objective of the research, emotional intelligence and its components were related to academic satisfaction. Statistically significant correlations were found in all cases (see Table 5).

For research purposes, professors were grouped by their age—30 to 44 years old and 45 years old or older—and according to the school where they teach—Humanities (Communication and Psychology) and Engineering (Civil Engineering, Industrial Engineering, Systems Engineering).

Table 3

Emotional Intelligence Level

Levels	*f*	%
Markedly High	0	0
Very High	11	13
High	20	23
Average	48	55
Low	5	6
Very Low	3	3
Markedly Low	0	0

Note: *f: frecuencia*

Table 4

Descriptive Measures of Emotional Intelligence and its Dimensions

Variables	*M*	*SD*	*Mín*	*Max*
Total Emotional Intelligence	105.81	12.16	78	124
Intrapersonal	100.13	12.47	65	118
Interpersonal	107.55	12.40	85	126
Adaptability	105.52	12.02	79	126
Stress Management	102.61	10.27	83	124
General Mood	108.00	12.18	75	128

Note: *M: Media, DE: Desviación estándar, Min: Puntaje mínimo, Max: Puntaje máximo*

Table 5

Correlation between Professor's Emotional Intelligence and Academic Satisfaction (n=87)

	EQ Total	Intrapersonal	Interpersonal	Adaptability	Stress Management	General Mood
Academic Satisfaction	.80*	.70*	.73*	.64*	.72*	.66*

Note: *Pearson's coefficient was used for the correlations due to the normality of the subscales. * <.001*

Subsequently, the academic satisfaction variable was correlated with the sociodemographic characteristics of the professors (sex, age, and the school where they teach). Direct correlations were obtained in all analyses. However, the only statistically significant relationship was between the variables professor's age and academic satisfaction. This relationship obtained a correlation coefficient equal to .53 ($p < .01$), which would indicate that higher student academic satisfaction would be associated with older professors.

On the other hand, contrasts were made between Emotional Intelligence means and their components according to the sociodemographic characteristics of the professors. In relation to the professor's sex, no statistically significant differences were found (see Table 6).

Table 7 shows the comparison of scores for Emotional Intelligence, according to the professors' age. The results show that older professors have, on average, higher Emotional Intelligence than younger professors. This trend is repeated in each of the components.

In addition, depending on the school, a higher score can be seen in the interpersonal component of the Humanities professors (see Table 8). They achieve statistically significant values only in this dimension of Emotional Intelligence.

Table 6

Comparison of Emotional Intelligence According to the Professors' Sex

	Sex	*M*	*SD*	*t*	*d*
Total EQ	Women (n=51)	107.61	12.02	0.97	0.35
	Men (n=36)	103.31	12.39		
Intrapersonal	Women (n=51)	101.28	11.76	0.60	0.21
	Men (n=36)	98.54	13.72		
Interpersonal	Women (n=51)	108.39	12.48	0.44	0.16
	Men (n=36)	106.38	12.69		
Adaptability	Women (n=51)	106.39	10.81	0.47	0.17
	Men (n=36)	104.31	13.89		
Stress Management	Women (n=51)	104.11	10.21	0.95	0.35
	Men (n=36)	100.54	10.39		
General Mood	Women (n=51)	110.72	8.85	1.38	0.52
	Men (n=36)	104.23	15.28		

Table 7

Comparison of Emotional Intelligence According to the Professors' Age

	Age group	*M*	*SD*	*t*	*d*
Total EQ	30 to 44 (n=51)	100	11.49	- 3.75*	1.41
	45 years or older (n=36)	113.85	7.88		
Intrapersonal	30 to 44 (n=51)	95.11	12.46	- 2.96*	1.11
	45 years or older (n=36)	107.08	8.87		
Interpersonal	30 to 44 (n=51)	101.89	11.2	- 3.51*	1.29
	45 years or older (n=36)	115.38	9.59		
Adaptability	30 to 44 (n=51)	100.17	12.08	- 3.39*	1.28
	45 years or older (n=36)	112.92	7.23		
Stress Management	30 to 44 (n=51)	98.11	9.36	- 3.32*	1.22
	45 years or older (n=36)	108.85	8.19		
General Mood	30 to 44 (n=51)	103.11	12.61	-2.95*	1.11
	45 years or older (n=36)	114.77	7.88		

*Note. *p<0.05*

Table 8

Comparison of Emotional Intelligence According to the School where Professors Teach

	Facultad	*M*	*SD*	*t*	*d*
Total EQ	Engineering (n=34)	104	12.49	-1.04	0.39
	Humanities (n=53)	108.67	11.56		
Intrapersonal	Engineering (n=34)	98	12.98	-1.21	0.45
	Humanities (n=53)	103.5	11.32		
Interpersonal	Engineering (n=34)	103.68	11.18	- 2.34*	0.85
	Humanities (n=53)	113.67	12.17		
Adaptability	Engineering (n=34)	105.16	12.97	-0.21	0.08
	Humanities (n=53)	106.08	10.87		
Stress Management	Engineering (n=34)	101.68	10.79	-0.63	0.23
	Humanities (n=53)	104.08	9.66		
General Mood	Engineering (n=34)	107.74	13.62	-0.15	0.06
	Humanities (n=53)	108.42	10.03		

*Note. *p<0.05*

Likewise, we compared the academic satisfaction variable means with the Total EQ levels. For the purposes of this analysis, it was decided to group the results into three levels: High level (markedly high, very high, and high levels), Average level (average level) and Low level (low, very low, and markedly low levels).

Table 9 shows that there are differences in academic satisfaction depending on the EQ levels of professors. It can be seen that professors with a higher level of Emotional Intelligence present greater academic satisfaction with their students (see Table 9).

In addition, contrasts were made between the means of the academic satisfaction variable in relation to the professor's sociodemographic characteristics (see Table 10). After the analysis, only one significant difference was found in relation to the professor's age. These results seem to indicate that a higher level of academic satisfaction in students is directly related to the professor's age.

Table 9

Comparison of Student Academic Satisfaction According to Emotional Intelligence Level

Academic Satisfaction	High level (n=37)		Average level (n=42)		Low level (n=8)		*F*	*p*
	M	*SD*	*M*	*SD*	*M*	*SD*		
	20.16	1.33	18.78	0.57	17.18	1.30	38.6	.000

Table 10

Comparison of Academic Satisfaction According to the Professor's Socio-demographic Characteristics

		M	*SD*	*t*
Sex	Women (*n*=51)	19.05	1.27	-0.29
	Men (*n*=36)	19.19	1.45	
Age	30 a 44 years old (*n*=51)	18.53	0.97	-3.36*
	45 or more (*n*=36)	19.93	1.36	
School	Humanidades (n=53)	19.35	1.1	-0.80
	Engineering (n=34)	18.96	1.46	

*Note. *p<0.05*

Discussion

In general, university professors were found to have average Emotional Intelligence. These results are consistent with the findings of Carcausto (2016) in Lima and of Contreras & Dextre (2016) in Huancayo. Only 9% of professors have a low or very low level of Emotional Intelligence. According to current legal regulations and the internal rules of the university, starting a career as a professor depends on the academic degree obtained (the basic requirement is having a Master's degree), demonstrating teaching experience of no less than three years, passing the psychological and soft skills filters by the department for teaching development, as well as a rigorous interview and demonstration class. The fulfillment of these requirements made it possible for the teaching staff to have been evaluated indirectly in skills that belong to the Emotional Intelligence construct. In this way, it is possible to explain the levels of Emotional Intelligence obtained by the professors who participated in this study.

The results show that there is a positive correlation between the professor's Emotional Intelligence and the student's academic satisfaction. Likewise, it is observed that the correlation between academic satisfaction and the interpersonal component (interpersonal relationships, social responsibility, and empathy) is greater than the correlations with the other components. However, it is important to mention that the stress management and intrapersonal components also obtain high positive correlation indices with academic satisfaction. The above seems to coincide with what was proposed by Fernandez et al. (2009) on empathy and socio-affective skills, with the proposal of Jennings and Greenberg (2009), and with the claims by Thomson and Palermo (2014) on emotions and their impact on teacher performance, with the contribution of Pertegal-Felices et al. (2011) on the relationship between the quality of the educational process and the teacher's emotional competencies, with the proposal of Almiron & Porro (2014) on the role of empathy in the success of teachers in class, with the proposals of Golombek & Doran (2014) on the link between emotions and the teaching process, and with the findings of Palomera et al. (2017) on emotional skills as facilitators of effective learning environments.

Although the premises do not directly relate the variables of this study, the findings presented reinforce the importance of the professor's Emotional Intelligence in the educational process and in the professor-student interaction. Emotional skills, specifically interpersonal skills, allow the professor to build and maintain over time relationships of mutual understanding with students, to fit in the group and demonstrate cooperation for the common good, to understand and appreciate emotions and feelings, to be committed to student academic performance, and

to create appropriate environments for learning and academic satisfaction. It could be said that the development of emotional skills in the professor translates into positive indicators of academic satisfaction.

It is also important to pay attention to the correlation level between academic satisfaction and the stress management component (second highest correlation index). This would indicate that the ability to handle difficult situations and resist adverse events without becoming overwhelmed (aggression and irresponsible behavior management) are factors that students perceive as positive and that contribute to the development of classes. In the same vein, the correlation index between academic satisfaction and the intrapersonal component (third highest index) would indicate that students value positively the fact that the professor recognizes his or her own emotions, defends his or her thoughts, respects himself or herself, shows desire to improve, and shows self-confidence.

Looking at the results of Emotional Intelligence by sex, it has been found that female professors score higher than their male colleagues on total EQ and on each of the emotional components. At first glance, these findings seem to be in line with Mandell & Pherwani (2003) in the United States, Borsic & Riveros (2017) in Mexico, and Sanchez et al. (2008) in Spain about the higher Emotional Intelligence index that women would have compared to men. However, according to the evidence in this study and the contrast of means, no significant differences are reported between Emotional Intelligence and the sex of professors, either in total EQ or in its components. The latter is in line with Danvila & Sastre's (2010) proposal on Emotional Intelligence levels. The authors explain that there are no differences in overall scores between men and women, but it is possible that differences are noticeable when putting these skills into practice, for example, in the case of empathy.

According to the results, professors aged 45 or older have higher Emotional Intelligence compared to younger ones (30-44 years old). These results coincide with the proposal of Abanto et al. (2000), Bar-On (2006), Brasseur et al. (2013), Luque-Reca et al. (2016), and Sharma (2017), who state that Emotional Intelligence correlates with age. However, Borsic & Riveros (2017) found that young adults (25-43) have higher Emotional Intelligence than teachers between the ages of 44 and 51, whereas Danvila & Sastre (2010) suggest that this relationship is not always positive, as it may diminish at a certain age. The statistical evidence from the study shows that there are significant differences between professors' age and total EQ, as well as in each of its components. This confirms that teachers aged 45 or older have greater Emotional Intelligence, which translates into a contribution to what was proposed by Abanto et al. (2000) and Bar-On (2006). As stated by Danvila and Sastre (2010), the experience of the teacher, which generally increases with age, becomes a factor that contributes to the development of Emotional Intelligence, so it cannot be assured that age is the only agent responsible for such development.

In the total EQ and in each of its components, the professors from the School of Humanities obtained higher scores than the engineering professors. However, only the interpersonal component showed a significant difference. This result seems to indicate that work should be done with these professors to improve their emotional skills and to analyze their university training process. In this line, the work of Neri & Hernandez (2019), conducted in Mexico, reported that 39% of engineering students present problems interacting with others and that 12% stated that they did not have such competence. According to the work of Marzo, Iglesias, & Torres (2006), engineer training does not respond to the demands of the labor market—there is a deficit in communication skills, teamwork, and leadership. Villa-Peralta (2017) recommends that engineer training should be framed within the demands of the contemporary world; Zepeda-Hurtado, Cardoso-Espinosa, & Rey-Benguría (2019) propose the creation of a hybrid profile that develops both the technical-scientific aspect and the communicative and soft skills.

The results indicate that professors with higher Emotional Intelligence report greater student satisfaction. It is unlikely that Emotional Intelligence is the only variable that can explain such scores in academic satisfaction, since,

as Abanto et al. (2000) mention, Emotional Intelligence is related to other variables such as cognitive intellectual capacity, personal behavioral factors, among others. What is certain is that, according to the evidence, Emotional Intelligence can be an indicator for evaluating the potential for success in university professors' performance. In addition, significant differences in academic satisfaction have been found when comparing results by age. Older professors seem to achieve higher levels of academic satisfaction, hence the importance of professional experience and life experience.

In conclusion, and according to the results presented, the relationship between the professor's Emotional Intelligence and the student's academic satisfaction is positive. No evidence has been found to affirm there are differences in Emotional Intelligence according to the sex of professors, but there are differences according to age. Professors in the School of Humanities show greater interpersonal skills and high academic satisfaction scores are evident in those students with older professors.

Based on the above, it is recommended to make explicitly mention the evaluation of the Emotional Intelligence variable in the selection process of faculty members, specifically in the interpersonal component, since this set of skills comes into play when interacting with students and, it seems, is significantly related to academic satisfaction. Likewise, the area of Academic Quality together with the Teacher Development Department of each university should promote the development of emotional skills in the professionals who are currently teaching, with the aim of improving the emotional development of the staff and promoting the use of these skills during the teaching-learning process. It would also be advisable to review the curriculum, not only of the humanities and engineering programs, but of all programs at the national level, in order to ensure that future professionals—and also future university professors—develop the technical-scientific skills proper to the career, as well as emotional skills that allow, according to Abanto et al. (2000), to successfully manage the demands of their context.

Due to the nature of the study's non experimental correlational design, it has not been possible to demonstrate a cause-and-effect relationship between the professor's Emotional Intelligence and the student's academic satisfaction. In addition, other variables such as personality type, cognitive intelligence of both the professor and the student, years of professional or teaching experience of the professor, career success, etc. have not been controlled.

As the results are not conclusive, it is recommended to promote new research in order to better understand the relationship between Emotional Intelligence and academic satisfaction. For example, it would be interesting to replicate this study in other universities in order to compare the results, to incorporate the professional experience of the professor as a variable to study his or her behavior together with Emotional Intelligence and academic satisfaction, and to adopt a mixed approach to study the Emotional Intelligence variable. In this way, we could explain, for example, the difference found in professors' scores according to the school and explore in depth the similarities and differences that are manifested in the development and use of these skills according to the sex of the participants. It would also be advisable that we study the relationship between the professor's Emotional Intelligence and the students' desire to stay in the institution and to finish the program they are in, since these aspirations are related to good levels of academic satisfaction in engineering students, according to data shown by Lent et al. (2007).

Despite the limitations, the findings of this study contribute to the knowledge about student-professor interaction at the university level, becoming a precedent for future research on emotional skills and their impact on the university learning environment and academic satisfaction. In addition, it is an academic effort that can contribute to the development of an emotional profile of university professors.

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