Analysing university students' life satisfaction through their socioemotional factors[1]

Análisis de la satisfacción vital del estudiantado universitario a través de factores socioemocionales

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Abstract

This study attempts to provide evidence of the relationship between emotional intelligence and resilience, with optimism vs. pessimism as mediating variables of life satisfaction. The sample included 403 university students. The average age was 20.86 (SD= 2.56). In relation to gender, 84.61% were female and 15.39% were male participants. Information was collected by means of four tools: Wong Law Emotional Intelligence Scale (WLEIS-S), Resilience Scale (RS-14), Life Orientation Test Scale Revised (LOT-R) and Satisfaction with Life Scale (SWLS). Regarding the association between Emotional Intelligence and Resilience, a statistically significant relationship was observed. Besides, positive relationships were found between optimism and satisfaction with life; while a negative association with pessimism was noted. The results indicate that students with a high level of emotional intelligence and resilience have higher scores in optimism and life satisfaction. Moreover, the structural equation model showed that Emotional Intelligence and resilience are able to predict higher life satisfaction directly (β= .19, and β= .26, respectively), but they may also mediate through optimism. This mediation effect did not appear with the pessimism factor. Finally, the practical implications

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of this study underline the need to promote emotional intelligence and resilience education programmes to improve personal well-being.

Keywords: Emotional intelligence; life satisfaction; optimism; resilience.

Resumen

Este estudio trata de aportar pruebas sobre la relación entre la inteligencia emocional y la resiliencia, con el optimismo frente al pesimismo como variable mediadora sobre la satisfacción vital. La muestra incluyó 403 estudiantes universitarios. La edad media es de 20.86 años (SD= 2.56). En relación con el género, el 84.61% eran mujeres y el 15.39% eran hombres. La información se recogió mediante cuatro instrumentos: Escala de Inteligencia Emocional de Wong Law (WLEIS-S), Escala de Resiliencia (RS-14), Escala de Test de Orientación Vital Revisada (LOT-R) y Escala de Satisfacción con la Vida (SWLS). En cuanto a la asociación entre la Inteligencia Emocional y la Resiliencia, se encontró una relación estadísticamente significativa. Asimismo, se encontraron relaciones positivas entre el optimismo y la satisfacción con la vida; y negativas con el pesimismo. Los resultados indican que los estudiantes con un alto nivel de inteligencia emocional y resiliencia tienen puntuaciones más altas en optimismo y satisfacción con la vida. Además, el modelo de ecuaciones estructurales mostró que la inteligencia emocional y la resiliencia son capaces de predecir una mayor satisfacción con la vida (β= .19, y β= .26, respectivamente), pero, además, también pueden mediar a través del optimismo. Este efecto de mediación no apareció con el factor pesimismo. Finalmente, las implicaciones prácticas de este estudio subrayan la necesidad de promover programas de educación en inteligencia emocional y resiliencia para mejorar el bienestar personal.

Palabras clave: Inteligencia emocional; satisfacción vital; optimismo; resiliencia.

Introduction and objectives

The university stage is characterised by many changes that affect the development and well-being of students. During this period, students experience many new situations for the first time, while at the same time they receive the necessary training that will enable them for their subsequent professional performance.

In this ever-changing environment, strongly related variables such as Emotional Intelligence (hereinafter EI) and resilience are considered to be protective qualities against adverse elements in an adaptive way (Sarrionandia et al., 2018). Emotional skills and resilience help to overcome obstacles and challenges that threaten a person's psycho-emotional balance and they are related to health (Sarrionandia & Mikolajczak, 2020). Different studies have shown that resilient people hold a more optimistic view of life and are characterised by high levels of EI. This enables the understanding, from an emotional perspective, regarding the psychological strengths that promote greater satisfaction with life (Lemisiou, 2018). Individuals in the university context face new challenges conditioned by the need to meet social needs that are not addressed by their education. In particular, an important finding in the study of dispositional optimism concerns the enhancement value of this variable between resilience and psychological well-being as a measure of coping in one of the most fruitful fields of EI research (Droppert et al., 2019). Thus, the appropriate use of emotional strategies could contribute

positively to experience greater well-being, by reinterpreting negative coping styles, and giving meaning to positive emotional states.

Considering the above-mentioned relationship between the variables of the study, the antecedents for each of the variables are presented below, in order to contextualise the current study.

Emotional intelligence

EI has become an essential element in the analysis and diagnosis of university students' competence development, as it is clearly a necessary component in the adaptive processes that lead to the attainment of the proposed achievements (Gavín-Chocano & Molero, 2020; Malhi et al., 2019). In general terms, EI could be defined as a person's ability to perceive, understand and regulate one's own emotions and those of others in an adaptive way (Mayer et al., 2016; Salovey & Mayer, 1990). Since its emergence in the 1990s, two theoretical models have attempted to contextualise this construct. Today, EI distinguishes between the ability (cognitive-emotional) EI model, measured through tests of peak performance, and the mixed EI (or emotional self-efficacy) model, measured through self-report questionnaires (Pérez-González et al., 2007). The first, the ability model (Mayer & Salovey, 1997), is focused on the ability to process information through emotions in adaptive conflict resolution (Fernández-Berrocal et al., 2018; Puigbó et al., 2019), its description is relevant in the understanding of internal processes and acquisition of emotional competencies (Gebler et al., 2020; Mayer et al., 2016; MacCann et al., 2020). A second approach, the mixed model (Bar-On, 1997; Petrides & Furham, 2001), combines mental abilities with personality traits; and it is defined as the set of emotional abilities, personal and interpersonal motivations that will condition the way of interacting when faced with external demands and pressures (Petrides et al., 2018). From this second approach, we can see the clear relationship between emotional intelligence and the next variable in our study, resilience (Belykh, 2019). There are several studies on EI which involved teachers and students. In the case of teachers, it has been related that there are mechanisms which underlie the positive role that teachers' positive self-perceptions and dispositions regarding the regulation of their own emotions have been shown to have on their life satisfaction (Luque-Reca et al., 2022). Regarding students, EI has been positioned as an important explanatory variable for academic performance, as the self-regulation processes inherent to this skill help students to adjust to the demands of the environment, as well as to preserve their socioemotional well-being (García-Martínez et al., 2021).

Resilience

Over the last few years, resilience has been postulated as a desired skill for the successful coping of adverse situations (Mérida et al., 2020). In fact, resilience may be defined as the set of resources, skills and abilities that a person has and uses in different challenging and complex situations to adapt positively to the demands of the environment and come out "strengthened" (Windle, 2011). Studies on resilience have undergone a

variety of phases up to the prevailing conceptualisation of resilience today. In fact, the growing amount of threats in society, added to the growing increase in remaining and complex situations, have prompted the study of this phenomenon from different disciplines and areas (Masten, 2015). In any case, and following Masten and Barnes (2018), the phenomenon of resilience has tended to be examined as a set of patterns of positive development in adverse contexts, and it is considered as an activity, a process or the result of adaptation (and the overcoming of a conflictive situation). These people were able to assess the risks, threats and difficulties of the context and mobilise readjustment processes to respond to the demands. This means that they were not vulnerable to stress. On the contrary, it implies the promotion of the functional, adaptive and psychological competencies required for the development of effective coping strategies (Grotberg, 1999).

Despite the origin of resilience is in the field of psychology, a great number of research studies have been carried out in the field of education (Ang et al., 2022; Brewer et al., 2019; Wosnitza et al., 2018). In this regard, the importance of the context where instructional processes take place is emphasised, because each educational stage has its own particularities. Specifically, in the university context the resilience as capacity of analysis of mental health and psychosocial balance of students, become of major importance (Killgore et al., 2020). In this stage, students develop from the relationships they build with their environment. In this vein, their capacity to analyse the situation, their pragmatism, adaptability and their self-regulation will play a crucial role in overcoming the obstacles they have to cope. In this regard, several studies on resilience in the field of education have focused on improving teacher well-being and professionalism (Schussler et al., 2018), while others have focused on the factors that shape learning environments and their impact on student performance (Fu et al., 2021). In a vulnerable situation such as that caused by the recent global pandemic, the promotion of resilient skills has been essential for overcoming the obstacles inherent in virtual teaching, which threatened high academic performance among students (Yıldırım & Tanrıverdi, 2021). In this regard, resilience has also been linked to life satisfaction and the level of engagement shown by undergraduates towards their studies in university students (Ayala & Manzano, 2018; Ramos-Díaz et al., 2019). In this regard, the present study advocates the complementarity between EI and resilience in order to analyse their relationship with optimism vs. pessimism and life satisfaction.

Optimism/Pessimism

The Optimism/Pessimism variable approach is the one proposed by Scheier and Carver's (1987) Dispositional Optimism model, which analyses the type of expectations that people generate for future events that they must experience, where there will be more successes than failures (Chang, 2001; Scheier et al., 2001). A second approach is the so-called "optimistic attributional style", promoted by Gillham et al. (2008).

While the first approach, optimism refers to people's expectations of achieving goals, the second focuses on attributions about events experienced in the past. In both cases, a positive/pessimistic dichotomy is apparent. In turn, they include cognitive aspects of personality and advocate that success depends on the person's ability to develop the

necessary strategies for coping with problems or complex situations. In this line, there is agreement in considering pessimism as the predisposition of people to examine any situation from a negative or unfavourable perspective. This perception is key in the definition of pessimists, since they are people with a tendency to judge and analyse events as negative, painful and long-lasting, and they are unable to identify the positive sides of any situation or context.

Similarly, they tend to underestimate their capacity for change, displaying self-defeating attitudes and attributing their failures and shortcomings to themselves (Seligman, 2006). For this purpose, the analysis of optimism indirectly requires the consideration of positivism, making it a two-dimensional construct (Zenger et al., 2013). Understanding that there is no well-founded theory that may explain the uni- or bi-dimensionality between optimism and pessimism (De Besa-Gutiérrez et al., 2019; Ottati, & Noronha, 2017), to analyse the relationship between any of the variables used with optimism and pessimism among university students (Gavín-Chocano & Molero, 2019; Merino-Soto & Ruiz del Castillo, 2018; Moreno-Medina & Álvarez-Chaparro, 2019; Nieuwenhuijse et al., 2020), this paper considers the dual dimensionality optimism vs. pessimism.

Finally, it is important to highlight that this construct has also been studied in the field of education. In particular, there are studies that have analysed students' optimism/pessimism and its relationship with other factors such as performance, academic satisfaction (Boileau et al., 2021) and even life satisfaction (Usán-Supervía et al., 2020).

Satisfaction with Life

Life satisfaction is one of the most widely used indicators in the assessment of people's mental health, as it is the most stable cognitive component of an individual's subjective well-being (Huebner et al., 2006). In general terms, life satisfaction may be defined as the cognitive assessment that people tend to make based on the experiences they have, the elements they have in their daily lives, the type of relationships they build, their economic and social status, as well as any other factor involved in their psychological and social well-being (Zhang et al., 2019). People' evaluation of their satisfaction with their lives has been associated with multiple factors, such as academic stress (Antaramian, 2017), resilience (Karaman et al., 2020) or emotional intelligence (Gavín-Chocano & Molero, 2020).

In the field of education, it has been concluded that people with higher levels of life satisfaction tend to have higher academic performance, the relationships they establish with peers and teachers are stronger and their degree of commitment to their studies is higher than those with lower levels (Shek & Chai, 2020). Similarly, high life satisfaction is associated with higher stress tolerance, more positive academic expectations, and a greater sense of self-efficacy and goal-oriented effort (Antaramian, 2017).

Objectives

Taking the above into account, the aim of this paper is to find out how different variables such as emotional intelligence, resilience and optimism/pessimism are related to life satisfaction in university students through a structural equation model (SEM Modeling).
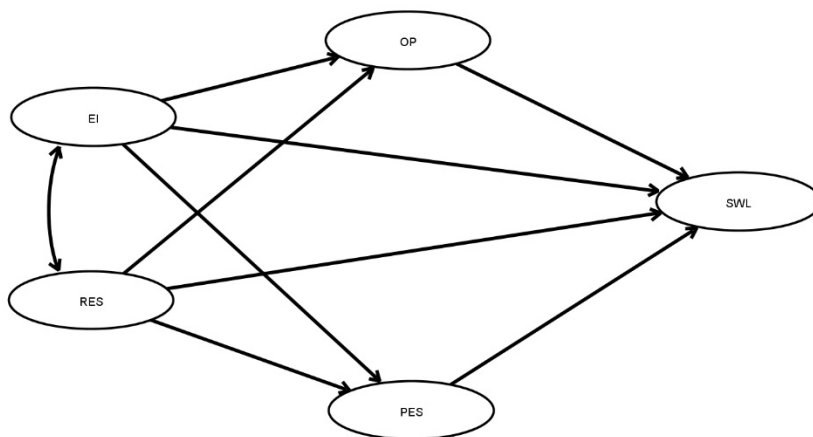
Figure 1. SEM theoretical model

Figure 1 represents the hypothetical theoretical model proposed to analyses the relationships of the proposed variables. As can be seen, our model aims to analyses the predictive capacity that variables such as Emotional Intelligence (EI) and Resilience (RES) have on students' life satisfaction (SWL) both through a direct relationship and through the possible mediation of the levels of Optimism (OP) or Pessimism (PES) shown by the students.

Method

Population and sample

The study was carried out through non-probability convenience sampling, in which students of Education degrees from two universities in the south of Spain were invited to participate voluntarily between January and March 2020. For this reason, the target population of this study and on which it is intended to infer the effects studied is the university population of the education degrees in Spain. We calculated the minimal sample size at 95% confidence level, with a 5% confidence interval at 80% of statistical power (Hair et al., 2010). In this regard, the estimated minimum sample size was 385.

The sample for this study consisted of 403 university students from education studies at the universities of Granada and Jaén (Spain), with an average age of 20.86 (*SD*= 2.56). In relation to sex, 84.61% were women and 15.39% were men. This proportion is consistent with the sex distribution in education degrees in Spain (Spanish National Statistics Institute, 2020). According to the degree in which they were enrolled, 48.3% were studying Early Childhood Education, followed by 31.6% who studied Primary Education and 20.1% who studied Social Education. According to the academic year to which they belonged, 31.06% were enrolled in the first year, 39.59% in the second year, 16.82% in the third year and 12.53% in the fourth year.

Instruments

Wong Law Emotional Intelligence Scale -WLEIS- (Wong & Law, 2002). This scale is composed of 16 short sentences used to evaluate four dimensions: Self-Emotion Appraisal (SEA), Other´s Emotion Appraisal (OEA), Use of Emotion (UOE) and Regulation of Emotion (ROE). Respondents are asked to rate their agreement with the sentences on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). We used the Spanish version conducted by Extremera et al. (2019), which has shown adequate validity and reliability in Spanish contexts (α =.91).

Spanish version of Resilience Scale RS-14 (Sánchez-Teruel & Robles-Bello, 2014). This instrument is designed to assess the individual's resilience through Equanimity, which refers to a balanced perspective on life and experiences and could be seen as just sitting back and taking what comes, thus moderating extreme responses to adversities, a construction often related to one' s mood. RS-14 scale validated by Sánchez-Teruel and Robles-Bello (2014) was used to determine resilience, which consists of 14 items, distributed in two dimensions: (a) Personal competence and (b) Self-acceptance and life acceptance. This scale has been shown to have a reliability (α) of .79.

Spanish version of Life Orientation Test Revised LOT-R (Scheier et al., 1994) developed by Remor et al. (2006). This scale has ten items that measure the degree of optimism ("I am always optimistic about my future") or pessimism ("I never expect anything to go my way") of the individuals. The response format is based on a five-point Likert-type scale. It has 10 items, out of which 3 evaluate the degree of the subject's positivism, 3 the degree of the subject's pessimism and the rest of the items are "filled in" the questionnaire. The participants will indicate the level of agreement or disagreement in each statement, from 1 (very much in disagreement), to 5 (very much in agreement). It is estimated that greater assessment means greater dispositional optimism. The internal consistency reliability (α) reported by the authors is α=.78.

Satisfaction with Life Scale -SWLS- (Diener et al., 1985). Specifically, we used the version of the Life Satisfaction Scale of Vázquez et al. (2013), composed of five items, with 7 response options. The scale in the Spanish version reports an internal consistency of α=.82.

Procedure and data analysis

The questionnaire was administered using Google Form. Our instrument was finally composed of 5 scales, giving a total of 46 items. The final version of the questionnaire began with a section detailing the objectives of the study and a checkbox for voluntary acceptance to participate in the study. Each one of the scales was presented in different blocks. First, a socio-demographic questionnaire was presented, in which participants were asked their gender, age, degree, university and the year in which they were enrolled. This was followed by the Emotional Intelligence block, in which there were 16 items, using a Likert scale with 7 answer options, in which 1 is "Completely Disagree" and 7 is "Completely Agree". These answer options were used for all scales in order to avoid bias between the constructs measured. Thus, the third one was Resilience,

made up of 14 items, followed by Optimism/Pessimism, which included of 6 items and, finally, Satisfaction with Life, which consisted of 5 items.

Regarding the procedure followed in the administration of the questionnaires, the researchers attended the classes of the potential participants to explain the purpose of the study. In those cases where it was not possible, the teaching staff was informed by researchers, so they could inform about the purpose of the study to their students and provide them with the link to fill the questionnaire. In all cases, the emails of the researchers were provided so that they could contact them in case of doubts or further information. Participation in the study was entirely voluntary, in accordance with the requirements of the Declaration of Helsinki (World Medical Association, WMA, 2009). This research has been approved by the Ethics Committee of University of Jaén (Reference: OCT.20/1.TES).

All analysis in this study was conducted with R software. The α value for all statistical tests was set to .05. Data Screening was performed before the factorial analysis to evaluate the distribution of data and assumptions. Before the treatment of the data obtained with the scales, the validity and internal consistency of the scales was verified by Confirmatory Factor Analysis (CFA). This analytical phase was carried out with a double objective: firstly, to ensure that the scales used show adequate psychometric properties in the sample under study and secondly, in order to be able to obtain the standardised loadings of each of the items that we will use afterwards through the CFA. Confirmatory Factorial Analysis (CFA) and SEM model analysis were conducted with *lavaan* R package (Rosseel, 2012). The *semTools* package has been used to calculate Composite Reliability (CR) and Average Variance Extracted (AVE). Diagonally weighted least squares (DWLS) was used as estimation method for CFA (Finney & DiStefano, 2013) to account multivariate non-normality. Cronbach's alpha and McDonald ω were used to assess reliability. Once the factorial treatment was done to the results of the scales, the scores given by the participants were scaled by the factor load resulting from the CFA, that is, the raw scores given by the participants to each item were multiplied by the standardised factor loads of each item (Beaujean, 2014). Finally, a theoretical model based on structural equations (SEM) is proposed to analyze the relationship between the latent variables measured by the different scales.

Results and discussion

Prior to the factorial treatment, the distribution of the data and the assumptions for the factorial treatment were analysed. The results of Mardia's Multivariate Normality Test showed that our data did not maintain a multivariate normal distribution ($Z_{Kurtosis}$ 47.121, $p < .01$). Data screening of the data revealed that the linearity assumption was not violated as no item showed multicollinearity ($r > .90$), nor singularity ($r > .95$). To analyse the homogeneity and homoscedasticity assumptions, we analysed the residuals resulting from the regression between our data and randomly generated data. Any anomaly in the distribution of the residuals is due to the behaviour of our data (Kline, 2015). The resulting distribution was not violating any assumptions, due to it indicated a distribution of standardised regression residuals mostly between -2 and +2.

Analysis of the subscales

Confirmatory Factorial Analysis (CFA) was carried out with the data obtained for each of the scales used to confirm the validity and internal structure of the whole questionnaire that was administered to the participants (Table 1).

Table 1

Factor Loadings for the different Scales

Scale	Latent Factor	Indicator	Estimate	SE	Z	p	β	AVE	CR
WLEIS (EI)	SEA	ei1	1.009	.040	24.942	<.001	.762	.605	.857
		ei2	1.154	.042	27.275	<.001	.869		
		ei3	1.155	.043	27.152	<.001	.849		
		ei4	.780	.035	22.409	<.001	.595		
	OEA	ei5	.661	.043	15.231	<.001	.641	.476	.776
		ei6	.819	.046	17.788	<.001	.768		
		ei7	.521	.044	11.911	<.001	.432		
		ei8	.950	.050	19.110	<.001	.894		
	UOE	ei9	.612	.037	16.665	<.001	.441	.389	.711
		ei10	.883	.042	21.094	<.001	.607		
		ei11	1.074	.047	22.684	<.001	.719		
		ei12	.947	.043	21.998	<.001	.676		
	ROE	ei13	1.113	.039	28.352	<.001	.851	.627	.870
		ei14	.997	.040	24.949	<.001	.649		
		ei15	1.199	.042	28.463	<.001	.906		
		ei16	1.162	.043	26.839	<.001	.787		
RS-14	RES	res1	.884	.038	23.375	<.001	.754	.381	.887
		res2	.549	.032	17.095	<.001	.519		
		res3	.649	.042	15.513	<.001	.431		
		res4	1.082	.048	22.480	<.001	.704		

Scale	Latent Factor	Indicator	Estimate	SE	Z	p	β	AVE	CR
		res5	.878	.040	21.869	<.001	.671		
		res6	1.058	.044	23.883	<.001	.727		
		res7	.810	.045	18.198	<.001	.502		
		res8	.536	.034	15.601	<.001	.433		
		res9	.435	.029	15.201	<.001	.441		
		res10	.706	.037	19.181	<.001	.566		
		res11	1.199	.048	24.795	<.001	.752		
		res12	.382	.026	14.549	<.001	.415		
		res13	.724	.040	18.070	<.001	.559		
		res14	.874	.037	23.796	<.001	.730		
LOT-R	OP	op1	1.120	.100	11.158	<.001	.681	.580	.804
		op4	1.307	.114	11.486	<.001	.850		
		op10	1.237	.109	11.325	<.001	.774		
	PES	op3	.717	.090	7.984	<.001	.446	.409	.665
		op7	1.058	.113	9.383	<.001	.690		
		op9	1.238	.130	9.543	<.001	.741		
SWLS	SWL	swl1	1.090	.065	16.674	<.001	.824	.504	.835
		swl2	.960	.064	15.044	<.001	.709		
		swl3	1.086	.064	16.912	<.001	.835		
		swl4	.994	.063	15.780	<.001	.724		
		swl5	1.192	.079	15.137	<.001	.612		

Note. WLEIS: Wong Law Emotional Intelligence Scale; EI: Emotional intelligence (SEA: Self-Emotion Appraisal, OEA: Other's Emotion Appraisal, UOE: Use of Emotion, and ROE: Regulation of Emotion); RS-14: Resilience Scale; RES: Resilience; LOT-R: Life Orientation Test Revised; OP: Optimism; PES: Pessimism; SWLS: Satisfaction with Life Scale; SWL: Satisfaction with Life. SE: Standard Error; Z: Z-values in the estimation; *p*: p-value for Z estimation; β: Standardised estimation; AVE: Average Variance Extracted; CR: Composite Reliability.

Wong Law Emotional Intelligence Scale (WLEIS-S). The factor loadings for the items of this scale are presented in Table 1. The CFA for WLEIS-S displayed an excellent fit (Hair et al., 2010), χ^2 (98) = 145.72, p = .001, con CFI = .991, TLI = .989, SRMR = .059, RMSEA = .034 (RMSEA 90% CI [.022, .045]). The reliability of this scale was Cronbach's α = .841 and McDonald's ω = .847.

Resilience Scale (RS-14). The factor loadings are presented in Table 1. The CFA results for the resilience scale showed an excellent fit (Hair et al., 2010), χ^2 (77) = 122.70, p = .001, con CFI = .984, TLI = .982, SRMR = .069, RMSEA = .041 (RMSEA 90% CI [.027, .055]). The reliability of this scale was Cronbach's α = .879 and McDonald's ω = .885.

Life Orientation Test (LOT). The factor loadings of the items of this scale are presented in Table 1. The scale adjustment after applying CFA proved to be excellent (Hair et al., 2010), χ^2 (8) = 5.35, p = .720, con CFI = 1.00, TLI = 1.00, SRMR = .031, RMSEA = .000 (RMSEA 90% CI [.000, .047]). The reliability of this scale was Cronbach's α = .808 and McDonald's ω = .810.

Satisfaction With Life Scale (SWLS). The factor loadings of the items of this scale are presented in Table 1. Adjustment of the scales after performing CFA showed to be excellent (Hair et al., 2010), χ^2 (5) = 2.03, p = .844, con CFI = 1.00, TLI = 1.00, SRMR = .023, RMSEA = .000 (RMSEA 90% CI [.000, .042]). The reliability of this scale was Cronbach's α = .842 and McDonald's ω = .843.

SEM Modeling

We have shown in the previous section that the scales used in our study provide valid and reliable information for each of the factors measured. Figure 2 shows the structural model proposed for the study.
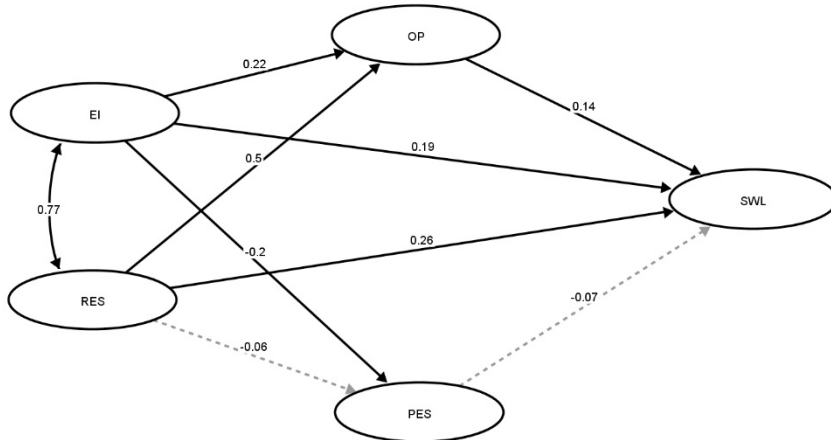

Figure 2. Results for the Mediational SEM Model

The latent variables measured through the different measurement scales are represented in the model by oval figures and the one-way arrows indicate regression relationships between the factors. The bidirectional arrows indicate correlation between factors. The hypothetical model indicates an excellent empirical adjustment (Hair et al., 2010), χ^2 (1) = 8.994, p = .003, con CFI =.988, TLI = .882, SRMR = .030, RMSEA = .152 (RMSEA 90% CI [.073, .249]). Relationships that were shown to be significant in the

model are presented by black arrows, while the dotted grey arrows represent relationships that were found to be non-significant. The values next to the arrows represent the standardised values of the relationships. The detailed results of the SEM analysis are presented in Table 2.

It can be seen that, except for the relationship of PES with RES (β= -.05, *p* = .49) and with SWL (β= -.06, *p* = .14), all the relationships in the model are significant. As we can see from the results emerging from the proposed model, our exogenous predictor variables EI and RES were shown to explain part of the variance of SWL through a direct relationship (β= .19, *p* = .003, and β= .26, *p* = .001 respectively). In addition to the effect on direct relationships, our model showed that our EI and RES variables additionally explained students' SWL scores through a mediational effect through the OP variable in both cases (EI=> OP: β= .21, *p* < .00; OP=>SWL: β= .14, *p* = .009, and RES=> OP: β= .50, *p* < .00; OP=>SWL: β= .14, *p* < .009, respectively). This mediation effect does not appear with the PES factor.

Table 2

Regression factors from Structural Equation Modeling

Latent Factor	Indicator	B	SE	Z	p	β
OP						
	RES	.502	.053	9.411	<.000	.502
	EI	.215	.052	4.101	<.000	.215
PES						
	RES	-.057	.082	-.687	.492	-.057
	EI	-.198	.081	-2.450	.014	-.198
SWL						
	RES	.255	.075	3.396	.001	.256
	EI	.193	.066	2.944	.003	.194
	PES	-.068	.047	-1.442	.149	-.068
	OP	.137	.052	2.628	.009	.137
RES						
	EI	.770	.067	11.416	.000	.772

Note. EI: Emotional intelligence; RES: Resilience; OP: Optimism; PES: Pessimism; SWL: Satisfaction with Life. *B*: Non-standardised estimation; SE: Standard Error; *Z*: Z-values in the estimation; *p*: p-value for *Z* estimation; β: Standardised estimation

The aim of this study was to find out how different variables such as EI, resilience and optimism/pessimism are related to life satisfaction among university students. For this

purpose, a mediational theoretical model based on structural equations was designed with the intention of identifying the mediational role played by the constructs EI and resilience, through the double dimensionality between optimism and pessimism, on the life satisfaction of university students. Based on the findings obtained, the viability of the proposed model has been observed, with excellent fit indices.

In particular, it has been shown that EI and resilience are able to directly predict the life satisfaction of university students. Studies such as the one developed by Zheng et al. (2021) with Chinese adolescents have also shown the predominant bidirectional relationship between EI and resilience. Other studies have shown the effect of emotional intelligence training on life satisfaction and resilience (Delhom et al., 2020). Furthermore, the study by Trigueros et al. (2020) argues for a predictive role of emotional intelligence on resilience, while emotional intelligence negatively predicted anxiety and academic stress. Therefore, it may be concluded that this study provides a model that has not been developed to date, in which emotional intelligence and resilience are positioned at the same level in the prediction of life satisfaction in university students.

Furthermore, the proposed model also found that resilience and EI can predict students' life satisfaction through optimism, but not through pessimism. Despite the fact that the optimism/pessimism dichotomy has not played a balanced role in the model collected, the results obtained are consistent with other similar studies (De Besa-Gutiérrez et al., 2019; Ottati, & Noronha, 2017), which argued that optimism affects people's view of coping with daily problems, as well as the resolution strategies employed in their day-to-day situations. In contrast, pessimistic people will perceive favourable events as temporary, specific and external, and which are not related to the moment or the circumstances at hand (Carver & Scheier, 2002). In this regard, it seems necessary to point out some of the limitations found in the examination of this psychological dichotomy through the instrument used (De Besa-Gutiérrez et al., 2019; Ottati, & Noronha, 2017), in the university population (Gavín-Chocano & Molero, 2019; Merino-Soto & Ruiz del Castillo, 2018; Moreno-Medina & Álvarez-Chaparro, 2019; Nieuwenhuijse et al., 2020). Likewise, the absence of a comprehensive view to address it makes it difficult to analyse the scope that this factor, or double factor, may have on the assessment of life satisfaction in the period of university life, which is already convulsive in itself.

Conclusions

In any case, nowadays, and even more so after the epidemiological situation that is being experienced worldwide, and where international organisations such as the United Nations (United Nations, 2021) are calling for sustainability in different areas, placing the emphasis on both health (objective 1) and quality education (objective 4), a more psychosocial approach in Higher Education must become a real priority, as well as necessary, not only to improve the students' achievement. Rather, it is about highlighting the human side of future professionals, empowering them and providing the tools they need to cope with the obstacles and complex situations that challenge their day-to-day lives and their upcoming entry into the world of work.

Our results show the complementarity of resilience and EI, jointly, with an impact on the bidirectionality of optimism and pessimism as mediating variables with life satisfaction. Secondly, they corroborate the relationship between EI and life satisfaction, as well as between optimism and pessimism. Finally, this paper provides evidence of the predictive validity of EI on resilience, optimism, pessimism and life satisfaction.

This research is not free of limitations. The first of these concerns the methodological design. In this regard, cross-sectional research, with a single measurement, is neither sufficiently reliable nor sufficiently robust to make a real diagnosis on the theme of the study. As a result of this consideration, further research will focus on the design of a longitudinal study based on a training programme in psychosocial factors, with the aim of empowering university students in these areas, as well as testing the effectiveness of the programme itself.

Secondly, there is a limitation related to the sample. The sex distribution of the sample, despite its consistency with the statistical data reported in this population, where a clear majority of the female gender is observed compared to the male gender, may lead to some bias. Further studies may consider the presence of students from other degrees, where the sex ratio is equal, which is not the case for the degrees analysed in our context.

In addition, it is necessary to consider that the participants in this study are mostly from the first year of their degrees; this might initially appear to be a limitation, but it responds to the reality of education-related degrees, since in the last years of their studies they are doing external internships in educational institutions.

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