



## Research paper

# Teachers' life satisfaction: A structural equation model analyzing the role of trait emotion regulation, intrinsic job satisfaction and affect



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## HIGHLIGHTS

- Trait emotion regulation can impact teacher well-being variables through various ways in the model.
- Positive and negative affect seem to partially mediate the trait emotion regulation-life satisfaction relationship.
- Positive and negative affect seem to mediate the trait emotion regulation-intrinsic job satisfaction relationship.
- The main determinant of life satisfaction is satisfaction with the intrinsic aspects of teaching.

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## ABSTRACT

Teaching is an emotionally demanding profession that can negatively affect teacher well-being. This cross-sectional study aimed to test a comprehensive structural equation model of both the direct and indirect (through affect and intrinsic job satisfaction) relationships between trait emotion regulation and life satisfaction in a sample of 404 Spanish teachers. The model obtained good fit ( $S-B \chi^2 = 319.142$ ,  $df = 201$ ,  $p < .001$ ; CFI = 0.957; RMSEA = 0.038). Outcomes suggested that: i) positive and negative affect mediates the relationship between trait emotion regulation and both life and job satisfaction; ii) job satisfaction is the main determinant of life satisfaction. Practical implications and limitations are also discussed.

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## 1. Introduction

Teaching is considered an especially demanding profession dominated by cognitive, social and emotional demands that are potentially aggravated by external factors related to political or organizational structures (Lomas et al., 2017). The emergence of positive psychology (Seligman & Csikszentmihalyi, 2000) has contributed to the current focus of researchers and the educational

community, not only on reducing negative aspects (e.g., stress, burnout, etc.) but, also, on enhancing the positive aspects (e.g., self-efficacy, emotional capacities, etc.) that generate higher levels of well-being and satisfaction in teachers (Chan, 2011).

The present study aims to increase the knowledge about the way in which certain individual emotional resources are able to promote teacher's job and life satisfaction. Beyond analyzing the possible contribution of trait emotion regulation and affect on life satisfaction, the main goal lies in deepening the relationships that the aforementioned emotional variables establish with each other and with the teacher well-being outcomes, all of this by testing a structural equation model.

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### 1.1. Teacher satisfaction

Life satisfaction is the cognitive component of subjective well-being. It is a widely explored construct in psychology that refers to individuals' overall evaluations of their life as a whole (Diener & Diener, 1995). The level of life satisfaction experienced by an individual will depend on the result obtained when comparing life conditions (i.e., achievements) with standards established by the individual themselves to define a good life (i.e., expectations) (Diener et al., 1985). Thus, an individual with high life satisfaction judges the conditions in which their life develops positively. Despite its relevance in the educational field, empirical studies on life satisfaction in teachers are still relatively scarce (especially when compared to studies which address variables such as teacher job satisfaction) (Dağh & Baysal, 2017). Moreover, considering research findings that life satisfaction is lower in teachers compared to the general population (Office for Standards in Education, 2019), it is interesting to delve deeper into those variables capable of positively affecting teacher life satisfaction. Some of the main determinants of life satisfaction will be reviewed below.

Another variable of interest in the present study is teacher job satisfaction. Job satisfaction is considered to be one of the most effective indicators of job well-being (Zhang et al., 2014). Job satisfaction refers to the affective reaction of professionals to their work when they compare expected and obtained outcomes (Spector, 1997). Regarding its conceptualization, debate still exists around whether job satisfaction is a global construct or whether it should be considered according to facets or dimensions (Schleicher et al., 2010). When, instead of assessing overall job satisfaction, job satisfaction is analyzed by dividing it into dimensions related to both intrinsic (e.g. satisfaction with the job itself, personal fulfilment, opportunities for growth, etc.) and extrinsic (e.g. satisfaction with pay, relationships with colleagues and supervisors, opportunities for promotion, etc.) job dimensions, the construct is viewed as multidimensional. Although many authors argue that job satisfaction is multidimensional (Toropova et al., 2021), one approach cannot be considered better than the other (Schleicher et al., 2010). Nonetheless, some authors argue that when examination is interested in detailing certain specific aspects of the construct, it is appropriate to assess it using a multidimensional approach (Schleicher et al., 2010). For this reason, the present paper adopts the latter approach in order to explore the role of intrinsic aspects of job satisfaction on teachers' well-being. In the field of teaching, its constitutive dimensions have also been explored. Aspects such as sense of belonging, motivation generated by promoting significant changes in the lives of students and enjoyment of teaching tasks seem to be the main sources of intrinsic job satisfaction in teachers (Skaalvik & Skaalvik, 2011). Is it not surprising, therefore, that job satisfaction plays a key role in the educational field since it not only promotes higher levels of engagement and enthusiasm but, according to the meta-analysis outcomes, it also has a protective role against burnout and intentions to quit the teaching profession (Madigan & Kim, 2021).

With regards to its relationship with life satisfaction, several studies have found an association between both variables (Haar et al., 2014; Heller et al., 2004; Karabati et al., 2019). Despite this, there has been some debate about the direction of the relationship between job satisfaction and life satisfaction (Shirom et al., 2012). Some authors have proposed that a potential spurious relationship exists (due to the effect of dispositional variables on both types of satisfaction), whilst meta-analyses confirm that once personality traits are controlled, job satisfaction continues to be capable of predicting life satisfaction (Heller et al., 2004). Similar results are found in studies with teachers, confirming that both general job satisfaction (Lee & Shin, 2017) and intrinsic job satisfaction (Olcár

et al., 2019) act as predictors of the level of life satisfaction.

Now that the two main outcome variables of the study (life satisfaction and job satisfaction) and their inter-relationships have been addressed and defined, we will now introduce the emotional variables that are expected to act as determinants of these variables.

### 1.2. The regulation of emotions: importance and conceptualizations

Emotions are fundamental for individuals to adapt to different areas of life (Schutte & Malouff, 2013). Several authors believe that emotional skills constitute one of the most important personal resources for work (Jordan et al., 2007). In the particular case of teachers, the role of emotional skills has been revealed to be essential due to the emotional nature of teaching itself (Uitto et al., 2015). One of the most extensively studied emotional phenomena is the regulation of emotions, which can be defined as the physiological, cognitive and behavioral processes that allow individuals to modulate the experience and expression of positive and negative emotions (Bridges et al., 2004). Regarding its relevance, appropriate regulation of emotions is thought to contribute to a better adaptation of the person in areas such as social, work or academic (Lopes et al., 2012).

The regulation of emotions has traditionally been studied from two different and relatively independent theoretical frameworks (Mestre et al., 2016; Peña-Sarrionandia et al., 2015) that are summarized below: The first is the framework known as emotion regulation or emotion regulation strategies (ER strategies), which focuses on the different strategies or tactics used during the process by which emotions are regulated. Within this tradition, the emotion regulation modal model (Gross & Thompson, 2007) is perhaps the theory with the greatest impact in this field of research to date (Mestre et al., 2016). The second is the framework of emotional intelligence (EI), which explores individual differences regarding how human beings identify, understand, use and regulate emotions (Mayer & Salovey, 1997; Petrides, 2010).

Within this last framework there are, in turn, two different study perspectives. On one hand, there is the EI ability perspective that, through maximum performance tests, explores differences in emotional information processing abilities, such as perceiving, understanding or managing emotions (Mayer et al., 2016; Mayer & Salovey, 1997). On the other hand, there is the trait EI perspective that, through self-reports, assesses a set of emotional self-perceptions located at the lower levels of personality hierarchies (Petrides, 2010). Thus, while the first EI perspective assesses cognitive abilities to process emotional information, the second assesses dispositions related to emotions and emotional self-efficacy beliefs (Barchard et al., 2016) that reflect the propensity to behave in a certain way in emotional situations (Peña-Sarrionandia et al., 2015).

Either from one perspective or another, one essential aspect of the study of EI is the analysis of individual differences in the regulation of emotions (Roberts et al., 2007). Therefore, in order to clarify that this study evaluates a key dimension of trait EI that refers to the individual's positive self-perceptions and dispositions regarding the regulation of their own emotions (and not the specific ER strategies implemented), the term trait ER will be used hereinafter. Focusing specifically on trait ER is in line with those authors who argue that, especially when seeking to predict outcomes in the workplace, it is preferable not to assess trait EI globally, but to assess its facets or dimensions independently, which are more informative (Hughes & Batey, 2017).

Although it has already been pointed out that there is a clear distinction between studying the regulation of emotions from a theoretical framework focused on the process (ER strategies) and

doing it from a framework focused on individual differences and their consequences on the person's adjustment (within which there are, in turn, two conceptualizations considerably disparate: emotion management ability versus trait ER), in recent years, various integrative models have been emerging in this field (Lopez-Zafra & Pulido-Martos, 2020). Perhaps the most comprehensive approach to date is the so-called integrated model of affect-related individual differences (Hughes & Evans, 2018), as it allows integrating the main frameworks and existing perspectives in the study of EI and the regulation of emotions (Lopez-Zafra & Pulido-Martos, 2020). This model proposes that both emotional processing abilities (as part of general intelligence) and affective personality traits (such as trait ER) would determine the identification, selection, and implementation of specific ER strategies that, in turn, would positively influence various adaptive outcomes (Hughes & Evans, 2018). Therefore, the same idea that other authors in this field have previously defended (Matthews et al., 2012) can be extracted from the model of Hughes and Evans (2018): to understand in depth both what it is to regulate emotions intelligently and its benefits, it is essential to integrate cognitive-emotional abilities, certain affective personality traits and the use of ER strategies.

In their model, Hughes and Evans (2018) incorporates several ideas from previous integrative theoretical approaches, such as the one proposed by Mestre et al. (2016), although trying to expand and further develop some of the postulates of these authors. Specifically, Hughes and Evans (2018) consider that, together with EI abilities and ER strategies, it is essential to place the focus also on emotion-related personality traits (among which is trait ER as part of trait EI), since they have a relevant role in the phenomenon of the regulation of emotions. Thus, affective dispositions, such as trait ER, contribute not only to understand this phenomenon in all its complexity but also to know the benefits on the individual's adaptation and the way in which this takes place.

The following section will address the empirical evidence of the relationships that trait ER maintains with the outcome variable of life satisfaction (paying special attention to studies with teachers), as well as with some of the variables that could act as mediators.

### 1.3. Trait emotion regulation-life satisfaction relationship: affect and job satisfaction as potential mediators

With regards to the relationship between trait ER and individual well-being variables, the important role played by trait ER has been demonstrated in students. In this sense, evidence has been accumulated which shows that positive dispositions and self-perceptions regarding ER predict life satisfaction in both college students (Chen et al., 2018; Limonero et al., 2012; Ruvalcaba-Romero et al., 2017) and adolescents (Extremera et al., 2007; Rey et al., 2011; Sánchez-Álvarez et al., 2015). However, given the emotional demands involved in the teaching process (Uitto et al., 2015), it will also be interesting to analyze these relationships in teaching professionals, whilst also exploring the potential existence of additional variables capable of mediating this relationship.

The present study proposes to focus on another emotional variable. The affective state experienced by individuals is a variable whose mediating role has been frequently explored both in Psychology and in the educational field. Similarities between affective phenomena such as emotions and mood (humor), make it common for them to be studied together in Psychology under the broader term of affect (Gray & Watson, 2007). Affect is defined as the affective state subjectively experienced by an individual (Watson et al., 1988). The bifactor model (Watson & Tellegen, 1985) proposes that this construct is composed of positive affect (PA) and negative affect (NA), which constitute two independent dimensions slightly correlated with each other. Thus, PA describes an

individual's affective state of activation, concentration and pleasure (usually related to feelings of happiness, interest or confidence). In contrast, NA describes an affective state of subjective distress and displeasure (usually related to emotional states such as fear, sadness or anger) (Watson et al., 1988).

In line with the idea that those who more effectively regulate their emotions find it easier to maintain a positive balance between the positive and negative emotions they experience in their lives (Mayer & Salovey, 1997), it has been found that trait ER is positively associated with PA and negatively associated with NA in both students (Thompson et al., 2007) and teachers (Augusto-Landa et al., 2012; Kafetsios & Zampetakis, 2008). Similarly, studies conducted in different groups demonstrate that affect is also significantly associated with life satisfaction (Extremera & Rey, 2016; Schimmack et al., 2008; Zhu, 2015). On the other hand, although it has been found to play a mediating role in the relationship between global trait EI and life satisfaction (Kong et al., 2019; Kong & Zhao, 2013), only one study to date has specifically focused on analyzing whether affect mediates the trait ER-life satisfaction relationship (Vergara et al., 2015). Hence, the aforementioned study found that only PA managed to fully mediate the trait ER-life satisfaction relationship (Vergara et al., 2015).

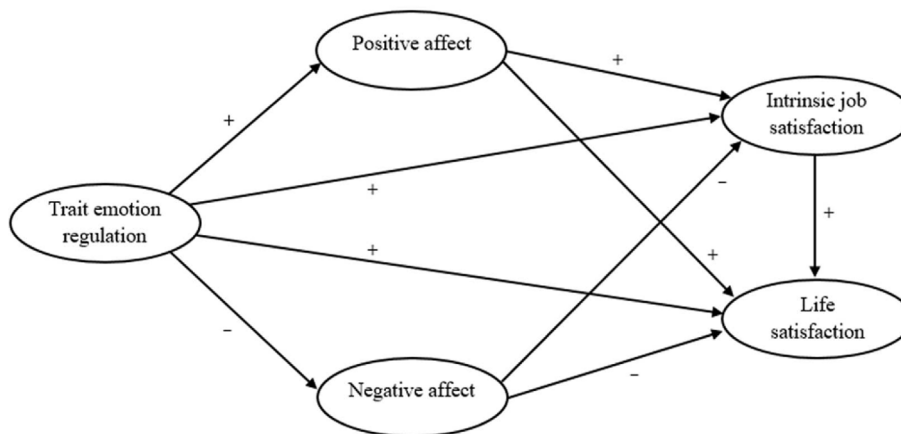
Although job satisfaction is one of the outcome variables analyzed in the present research, it should be noted that, in the model to be tested below, job satisfaction also acts as a potential mediator between trait ER and life satisfaction. Specifically, previous studies have found trait ER to positively impact job satisfaction in both healthcare professionals (Augusto et al., 2006; Güleriyüz et al., 2008) and teachers (Joshi et al., 2015).

In the work setting, PA and NA have also been revealed to be important determinants of organizational life, with affective experiences in the work environment and other factors being capable of determining professional attitudes towards work (Thoresen et al., 2003). Specifically, PA and NA have been positively and negatively related, respectively, to the level of job satisfaction experienced by professionals from different sectors (Fiori et al., 2015; Rouxel et al., 2016). However, in accordance with those authors who argue that teachers' affectivity have received limited attention (Huang & Yin, 2018), there is no study to our knowledge that has explored the mediating role of affect in the relationship between trait ER and job satisfaction. Thus, there is only one study with teachers which, by evaluating global trait EI instead of exclusively trait ER, found that both PA and NA (the latter in a negative way) act as mediators (partial mediation in this case) in the trait ER-job satisfaction relationship (Kafetsios & Zampetakis, 2008). Overall, these findings point to the fact that the positive and negative emotional state of teaching professionals is capable of conditioning, not only, the extent to which they are satisfied with their life in general but, also, with their profession.

### 1.4. Objective of the present study

The purpose of the present study is to delve into some of the mechanisms underlying the positive role that the teacher's positive self-perceptions and dispositions regarding the regulation of their own emotions has been shown to have on their life satisfaction. Consistent with previous literature, the present study aims to test a comprehensive structural equation model (SEM) of the direct and indirect (via affect and intrinsic job satisfaction) relationship between trait ER and life satisfaction in a sample of Spanish teachers. Specifically, the following hypotheses are proposed (these being reflected in the relationships between variables shown in Fig. 1):

**Hypothesis 1.** Given evidence pertaining to teachers (Vergara et al., 2015) and other collectives (Kong et al., 2019; Kong & Zhao,



**Fig. 1.** Proposed model of the determinants of teachers' life satisfaction. Note: Symbols + and - represent expected positive and negative associations, respectively. For simplification, indicators (items) pertaining to latent variables have not been included.

2013), both PA and NA are expected to act as potential mediators of the trait ER-life satisfaction relationship, these relationships will be positive in the case of PA and negative in the case of NA.

**Hypothesis 2.** In accordance with previous evidence in teaching professionals (Kafetsios & Zampetakis, 2008), it is hypothesized that both PA and NA will act as potential mediators of the relationship between trait ER and intrinsic job satisfaction, with positive and negative relationships being established, respectively, with PA and NA.

**Hypothesis 3.** Based on studies with health (Augusto et al., 2006; Güleriyüz et al., 2008) and education (Joshi et al., 2015; Lee & Shin, 2017; Olçar et al., 2019) professionals, it is anticipated that intrinsic job satisfaction will act as a potential mediator of the relationship between trait ER and life satisfaction.

**Hypothesis 4.** In addition to indirect pathways via affect and intrinsic job satisfaction, trait ER is also expected to be directly related with life satisfaction given research conducted with adolescents (Rey et al., 2011; Sánchez-Álvarez et al., 2015).

## 2. Methods

### 2.1. Participants and procedure

The study initially involved 452 primary school teachers from southern Spain. Of these, 423 completed all instruments. Ages ranged from between 22 and 65 years ( $M = 39.09$ ;  $SD = 10.22$ ), with the majority being women (62.1%). Of the total number of teachers, 69.6% worked in public schools, 27.2% in state schools with state subsidy and 3.2% in private schools lacking state subsidy. Teaching experience ranged from 1 to 44 years ( $M = 13.38$ ;  $SD = 9.83$ ). All participants agreed to participate voluntarily after they were informed about the purpose of the research. The guidelines of the Declaration of Helsinki (59th General Assembly of the World Medical Association, Seoul, October 2008) and current Spanish legislation regulating research on human subjects (Royal Decree 561/1993 on clinical trials) were followed at all times. This research was also approved by the Ethics Committee of University of Jaén (Reference: OCT.20/1.TES).

### 2.2. Instruments

#### 2.2.1. Socio-demographic variables

Short ad hoc questionnaire that collects information on age,

gender, type of educational centre and time spent in the profession.

#### 2.2.2. Trait emotion regulation

Wong and Law Emotional Intelligence Scale (WLEIS; Wong & Law, 2002; Spanish translation by Extremera et al., 2019). Following those authors who recommend the isolated use of trait EI dimensions to predict workplace outcomes (Hughes & Batey, 2017), only the 4 items belonging to the subscale termed “regulation of emotions” were used to assess the individual's dispositions and self-efficacy related to the regulation of their own emotional states. This measure, mainly used in work contexts (Lopez-Zafra & Pulido-Martos, 2020), has a Likert-type response format ranging from 1 (strongly disagree) to 7 (strongly agree). Psychometric properties of this subscale are adequate, with an internal consistency of 0.83 (Wong & Law, 2002).

#### 2.2.3. Positive and negative affect

International Positive and Negative Affect Schedule Short Form (I-PANAS-SF; Thompson, 2007; Spanish translation by Gargurevich, 2010). A 10-item questionnaire developed from the original Watson et al. (1988) test which assesses normal affective state. It consists of two subscales, with one half of items measuring PA and the other half measuring NA. The test uses a Likert-type response scale ranging from 1 (very slightly or not at all) to 5 (extremely). Its psychometric properties have been shown to be adequate, obtaining an internal consistency of 0.72 or higher for both subscales in both the original version and the Spanish version (Gargurevich, 2010; Thompson, 2007).

#### 2.2.4. Intrinsic job satisfaction

Job Satisfaction Scale - Teacher's Form (JSS-TF; Anaya & Suárez, 2007). Although the scale is capable of providing an overall job satisfaction score, only the items evaluating intrinsic aspects related to the extent to which performed work is perceived as valuable, adequate to one's own abilities, and contributes to achieving personal goals and desired performance were used. This test consists of a Likert response scale ranging from 1 (very low) to 5 (very high) and has shown adequate convergent, discriminant and construct validity. Internal consistency scores are close to 0.92 (Anaya & Suárez, 2007).

#### 2.2.5. Life satisfaction

Satisfaction With Life Scale (SWLS; Diener et al., 1985; Spanish translation by Vázquez et al., 2013). A 5-item scale that assesses



individual life satisfaction. The test consists of a Likert-type response scale ranging from 1 (strongly disagree) to 7 (strongly agree). The scale has adequate psychometric properties, with high convergent and divergent validity. It has an internal consistency of 0.87 for the original version (Diener et al., 1985) and 0.88 for the Spanish version (Vázquez et al., 2013).

### 2.3. Statistical analysis

SEM analysis was used to check the fit of the proposed theoretical model to the data due to its suitability for testing mediational hypotheses compared to techniques such as linear regression. In addition, it allows measurement error to be estimated (Garson, 2012). IBM SPSS version 22.0.0.0 (Armonk, NY, USA) was used for descriptive and exploratory analyses of missing values, while EQS version 6.2 (Encino, CA, USA) was used for SEM analysis.

As a preliminary step, the Little test (1988) was used, with results ( $\chi^2 = 67.97$ ,  $df = 130$ ,  $p > .05$ ) indicating that the absent values were “missing completely at random” (MCAR). As MCAR data were available and did not exceed 5% of the total number of cases (18 subjects had missing values), it was decided to follow the criteria of several authors (Garson, 2012; Graham, 2009) and eliminate those cases with missing values (listwise deletion). This was done so as not to compromise reliability of the data. Consequently, the sample was slightly reduced to 404 participants.

Following this, assumptions of multivariate normality were tested. A standardised Mardia coefficient of 21.75 was obtained indicating non-normality of the data (Ullman, 2006). This situation requires the use of robust fit statistics such as the Satorra-Bentler  $\chi^2$  (S-B  $\chi^2$ ; Satorra & Bentler, 1994), which corrects biases such as those caused by non-normal data distributions (Kline, 2015). Moreover, it is appropriate to treat ordinal variables with 5 or more categories, as is the case of the present study, as continuous variables and to use the maximum likelihood method with a robust statistic (Rhemtulla et al., 2012).

Convergent validity and reliability (internal consistency) was evaluated according to average variance extracted (AVE) and composite reliability (CR).  $AVE \geq 0.50$  and  $CR \geq 0.70$  were considered adequate. As an alternative,  $AVE < 0.50$  was also acceptable as long as  $CR > 0.60$  (Fornell & Larcker, 1981).

Goodness of fit of both the measurement model (which

evaluates the validity of latent variables or constructs by exploring indicator variables or items) and the structural model (which addresses the dependence relationships between constructs or latent variables) was assessed by: (i) S-B  $\chi^2$ , degrees of freedom (df) and p values; (ii) comparative fit index (CFI) as an incremental fit index; and (iii) root mean square error of approximation (RMSEA) with 90% confidence intervals (CI). In consideration of the sample size (above 250) and the number of indicator variables, adequate model fit was defined as S-B  $\chi^2$  p value  $\geq .05$ ,  $CFI \geq 0.92$  and  $RMSEA \leq 0.07$  (Hair et al., 2014).

Lastly, Harman’s single-factor test was used to test the common method variance issue as this could compromise the validity of findings (Podsakoff et al., 2003).

### 3. Results

First, standardized factor loadings of the indicators or items of the measurement model were analyzed. All factor loadings were statistically significant ( $p < .01$ ) and higher than the reference value of 0.50 (Hair et al., 2014), with the exception of two indicators of the NA construct, one indicator of the NA construct and two indicators of the intrinsic job satisfaction construct (which were eventually eliminated). Thus, the measurement model was composed of 22 indicators grouped into five latent variables or constructs: trait ER, PA, NA, intrinsic job satisfaction and life satisfaction (see Table 1).

With regards to the measurement model, adequate validity and reliability (evaluated with AVE and CR, respectively) were demonstrated for each of the latent variables included in the model (Table 2). All correlations between the latent variables of the model were significant ( $p < .01$ ), except for the relationship between PA and NA (Table 2). Moreover, the model revealed good adjustment (S-B  $\chi^2 = 313.529$ ,  $df = 199$ ,  $p < .001$ ;  $CFI = 0.959$ ;  $RMSEA = 0.038$  [90% CI from 0.030 to 0.046]).

With respect to the structural model, the results also showed good fit of the proposed theoretical model (S-B  $\chi^2 = 319.142$ ,  $df = 201$ ,  $p < .001$ ;  $CFI = 0.957$ ;  $RMSEA = 0.038$  [90% CI from 0.030 to 0.046]). Thus, as depicted in Fig. 2, all the relationships that were initially proposed between the latent variables were statistically significant, apart from the relationship between trait ER and life satisfaction ( $p = .15$ ). Specifically, both trait ER and affect (positive and negative) predicted teachers’ life satisfaction. In parallel,

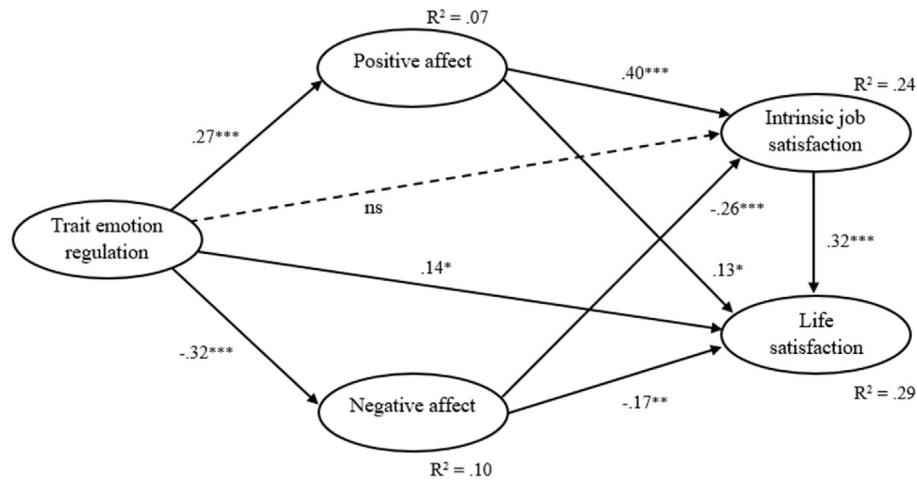
**Table 1**  
Descriptive statistics and factor loadings pertaining to the indicator variables (n = 404).

Indicator variables	minimum	maximum	M	SD	Standardized factor loadings
Trait emotion regulation 1	2	7	5.36	1.00	.62
Trait emotion regulation 2	1	7	5.27	1.10	.78
Trait emotion regulation 3	1	7	5.07	1.24	.64
Trait emotion regulation 4	2	7	5.35	1.07	.79
Positive affect 1	1	5	3.34	0.95	.66
Positive affect 2	1	5	3.19	1.00	.63
Positive affect 3	1	5	3.51	0.87	.76
Positive affect 4	1	5	3.75	0.98	.76
Negative affect 1	1	5	3.97	1.00	.79
Negative affect 2	1	5	4.49	0.96	.78
Negative affect 3	1	5	4.49	1.12	.60
Intrinsic job satisfaction 1	2	5	4.35	0.75	.59
Intrinsic job satisfaction 2	2	5	4.21	0.72	.66
Intrinsic job satisfaction 3	2	5	4.09	0.72	.62
Intrinsic job satisfaction 4	1	5	4.00	0.70	.65
Intrinsic job satisfaction 5	1	5	4.00	0.74	.64
Intrinsic job satisfaction 6	2	5	4.27	0.71	.70
Life satisfaction 1	3	7	5.67	0.92	.72
Life satisfaction 2	2	7	5.37	1.00	.82
Life satisfaction 3	2	7	5.74	0.95	.88
Life satisfaction 4	2	7	5.50	1.09	.72
Life satisfaction 5	1	7	4.92	1.44	.59

**Table 2**  
Correlations between latent variables, reliability and validity analysis (n = 404).

	CR	AVE	1	2	3	4	5
1. Trait emotion regulation	.80	.51	—				
2. Positive affect	.80	.50	.27**	—			
3. Negative affect	.77	.53	-.32**	.02	—		
4. Intrinsic job satisfaction	.81	.41	.26**	.40**	-.25**	—	
5. Life satisfaction	.86	.56	.31**	.30**	-.30**	.45**	—

Note. CR = composite reliability; AVE = average variance extracted. \*\* $p < .01$ .



**Fig. 2.** Final model of the determinants of teacher's life satisfaction. Note: All regression coefficients are standardized; R<sup>2</sup>, determination coefficient; \*\*\*,  $p \leq .001$ ; \*\*,  $p \leq .01$ ; \*,  $p \leq .05$ ; ns, non-significant. For simplification, factor loadings of the indicators of the latent variables have not been included.

intrinsic job satisfaction was explained by affect and, in turn, predicted life satisfaction. The variables included in the model explained 29% of the variance observed in teachers' life satisfaction.

Finally, as shown by the results of the Harman's single-factor test ( $S-B \chi^2 = 1661.355$ ,  $df = 209$ ,  $p < .001$ ;  $CFI = 0.477$ ;  $RMSEA = 0.131$  [90% CI from 0.125 to 0.137]), a single factor could not account for variance in the data. This indicates that common method variance bias was not an issue in the present study.

#### 4. Discussion

Teaching is a highly emotionally demanding profession which often affects the physical and psychological health of educators (Zysberg et al., 2017). Thus, examination of key factors of teacher well-being in recent years has focused on teachers' emotional self-perceptions and dispositions (Burić et al., 2017; Yin et al., 2013).

The present study contributes to knowledge of key individual resources for teachers by testing a comprehensive model of the impact of trait ER on job and life satisfaction in primary school teachers. The model identified some of the emotional variables to predict teacher well-being and explored underlying mechanisms by analyzing mediational and direct relationships between the variables under study. Overall, the model obtained good fit and explained both job satisfaction and life satisfaction of teachers to a significant yet modest extent.

##### 4.1. Discussion of the specific relationships addressed in each hypothesis

With regards to the first proposed hypothesis, the results of the present model showed that positive and negative affectivity mediate the relationship between trait ER and life satisfaction.

These results are consistent with findings of previous studies conducted with teachers (Vergara et al., 2015) and staff members from other professional groups (Kong et al., 2019). This suggests that teachers characterized by positive self-perceptions and dispositions regarding the regulation of their own emotions typically experience more positive affective emotional states and fewer negative emotions. This may lead them to value their lives more positively. Thus, it has been proposed that greater trait EI may allow

individuals to extend or enjoy to a greater extent their positive emotional states and thereby generate greater life satisfaction (Szczygiel & Mikolajczak, 2017). Something similar could happen with negative emotions, with those with higher levels of trait ER managing to reduce the duration of negative emotions, which could increase their life satisfaction. Another possible explanation is that teachers who perceive themselves to be effective in regulating their emotions, experience a general feeling of self-efficacy that may be responsible for experiencing greater PA and this positive affectivity may lead to greater life satisfaction (Vergara et al., 2015).

Results also provided support for the second hypothesis. Trait ER was shown to be capable of indirectly influencing intrinsic job satisfaction through both PA and NA (negatively in this case). These findings could be explained based on the Affective Events Theory (Weiss & Cropanzano, 1996), which proposes that, together with the work events, the affective traits (e.g., trait ER) of the individual determine the cumulative affective experiences in the work environment and this shapes work attitudes (e.g., intrinsic job satisfaction). Thus, as Weiss and Cropanzano (1996) suggest, a teacher with a high ER will experience negative affective states less frequently than positive ones (since they will be predisposed to react less strongly to hypothetical negative work events), which will make them maintain positive attitudes towards teaching. Finally, although the only study examining this issue in teachers have found that PA and NA act as partial mediators of this relationship (Kafetsios & Zampetakis, 2008), present results suggest the existence of full mediation. This is in accordance with conclusions made by a meta-analysis of 119 studies including diverse professional samples (Miao et al., 2016).

The third proposed hypothesis was also fulfilled, although not in its totality. Whilst intrinsic job satisfaction predicted life satisfaction, the results of the proposed model suggest that trait ER impacts

intrinsic job satisfaction indirectly (via PA and NA) as opposed to directly. These results may be due to the fact that the studies substantiating this hypothesis did not go as far as exploring the role of mediating variables, such as affect, on the relationship between trait ER and job satisfaction (Augusto et al., 2006; Güleriyüz et al., 2008; Joshi et al., 2015). However, as discussed above, there is increasing evidence of a mediating role played by both PA and NA on this relationship (Miao et al., 2016), as is consistent with present findings. With regards to the relationship between intrinsic job satisfaction and life satisfaction, results of the present model are in line with claims made by other authors that satisfaction experienced in the job domain has an impact on other aspects of general life (Wright et al., 1999). Another possible explanation is that professionals who are more satisfied with their work show a lower tendency to ruminate, engaging less in the negative thoughts and memories that may negatively condition judgments around life satisfaction (Karabati et al., 2019).

In addition to the indirect pathway seen through affect (positive and negative) and intrinsic job satisfaction, the structural model also revealed the direct impact of trait ER on teachers' life satisfaction, suggesting a partially mediated relationship. The fourth proposed hypothesis is therefore fulfilled. These results indicate that high trait ER in itself is capable (without the need to act through other mediating variables) of making teachers feel more satisfied with their own life conditions. However, other variables such as social support, resilience or self-esteem, that were not examined in the present study, have also been revealed to be potential mediators in studies conducted with other groups and their potential impact cannot be discarded here (Kong et al., 2019; Kong & Zhao, 2013; Koydemir et al., 2013; Liu et al., 2013). In this vein, and in line with the integrative theory developed by Hughes and Evans (2018), another variable that has not been explored in this study and that could play a key role as a mediator in the trait ER-life satisfaction relationship is the teacher's use of specific ER strategies. Thus, on one hand, affective dispositions (e.g., trait ER) would act as antecedents of ER strategies, since they are capable of shaping individuals' preferences, attentional focus, and interpersonal behavior that, in turn, influence the choice of ER strategy (Hughes & Evans, 2018; Peña-Sarrionandia et al., 2015). On the other hand, the use of adaptive ER strategies would be the variable responsible for generating positive social, health and/or occupational outcomes (Hughes & Evans, 2018). However, in line with some authors (Peña-Sarrionandia et al., 2015), it is likely that experiencing positive outcomes such as life or job satisfaction depends not only on the use of effective ER strategies but also on the repertoire of such strategies and the flexibility that the teacher has to implement them.

#### 4.2. General discussion of the model and its implications

In general, the model shows teachers' trait ER can contribute to greater life satisfaction. Specifically, it appears that teachers characterized by positive self-perceptions and dispositions regarding the regulation of their emotions are able to maximize positive emotional states and minimize negative ones. This higher ratio of positive to negative emotions would make them, not only, more satisfied with the intrinsic facets of their work but, also, more satisfied with their life as a whole. Moreover, the fact that a teacher perceives themselves to be more skilled at regulating their emotional state is capable, in itself, of influencing (without the need to act through other mediating variables) overall life satisfaction. However, it does not appear to impact satisfaction with intrinsic aspects of the profession by itself. This could be due, as suggested by previous research (Güleriyüz et al., 2008; Sánchez-Álvarez et al., 2015), to the fact that the association of trait ER with life satisfaction

seems to be closer and more consistent (correlations between 0.29 and 0.34) than that seen with intrinsic job satisfaction (correlation of 0.25). This means that its relationship with life satisfaction remains significant, even when mediating variables such as affect are added into the model.

Findings suggest that the relationship between emotional variables and teacher well-being outcomes is relatively complex. Thus, comprehensive models of this type may be useful for identifying the most effective interventions for improving specific aspects of teacher well-being. For example, when the aim is to ensure that teachers are satisfied with the intrinsic facets of their work (e.g., that they feel fulfilled, valued and enthusiastic about teaching), it may be useful to work on their trait ER but it will be more important to ensure that they experience a positive affective balance (i.e., more positive emotions than negative ones) in educational contexts. Moreover, in accordance with the demonstrated superiority of positive over negative affectivity in the workplace (Thoresen et al., 2003), present outcomes suggest that, when it comes to helping teachers feel satisfied with their profession, the protective role of positive emotions is greater than the detrimental role of negative emotions. This idea may be of practical interest given that teaching is one of the most emotionally demanding professions and entails experiencing negative emotions frequently (Lomas et al., 2017; Oliveira et al., 2021). Thus, a good alternative when it is not possible to change the educational context and reduce these emotions could be to try to generate positive emotions in order to compensate.

This being said, the analyzed model suggests that when seeking to design an intervention that produces a concurrent improvement in different aspects of teacher well-being (e.g., job satisfaction and life satisfaction), the most practical approach is develop teachers' trait ER. In this vein, meta-analyses have shown that socioemotional training programs for teachers are effective, not only, at enhancing emotional resources but, also, at improving well-being and reducing psychological distress (Oliveira et al., 2021).

The potential benefits of training teachers' trait ER resources could be extended to other agents in the educational process, such as students. Specifically, there is evidence that students taught by teachers with higher levels of well-being and life satisfaction tend to achieve better academic outcomes than those taught by teachers who are more dissatisfied and emotionally exhausted (Arens & Morin, 2016). In fact, the availability of personal resources, such as trait ER, that enable better management of teaching demands leads to a positive impact on both teacher well-being and student learning processes (Lee & Shin, 2017). Moreover, evidence of emotional contagion between teachers and students (Reyes et al., 2012) suggests that teachers characterized by positive self-perceptions and dispositions regarding the regulation of their emotions may contribute to creating positive classroom climates which favor student motivation and teacher job and life satisfaction.

#### 4.3. Limitations

Among the main limitations of this work is, firstly, its cross-sectional design. This does not allow causal inferences to be made and caution must be taken when making conclusions around mediation given that there is no temporal precedence for the evaluation of many variables (Kline, 2015). In order to address this limitation, future studies with teachers should employ longitudinal designs to gain a deeper understanding of the associations between variables. Secondly, using the PANAS (Thompson, 2007) to measure affect may be another limitation because this instrument essentially assess affective states of high arousal (Ekkekakis, 2013). This could bias the evaluation of affectivity by preventing knowing if the



individual experiences affective states (positive or negative) of low or medium arousal (e.g., serenity, sadness, etc.). Further, despite the good fit shown by the model, alternative models were not tested and so the possibility that other models also fit the data adequately cannot be ruled out. Finally, the use of a convenience sample and the omission of some potentially relevant variables (e.g., resilience, social support, self-esteem, burnout, etc.) means that caution should be exercised when generalizing present findings. In this sense, it is recommended that, together with the variables explored in this study, future works also evaluate cognitive abilities of emotion management and ER strategies implemented by teachers, which are included in integrative approaches developed in this field (e.g., Hughes & Evans, 2018) that still need to be empirically contrasted globally (Lopez-Zafra & Pulido-Martos, 2020).

## 5. Conclusion

To our knowledge, the present study is the first carried out with teachers using SEM methodology to simultaneously evaluate the mediating role of PA, NA and intrinsic job satisfaction on the relationship between trait ER and life satisfaction. By combining all of these variables within a single model, inter-relationships and unique differential contributions can be discerned by considering shared variance between examined predictors of life satisfaction in teachers. In addition to the almost complete fulfillment of proposed hypotheses, present outcomes also seem to support the important role played by teachers' self-perceptions and dispositions regarding the regulation of their emotions on teacher well-being. Thus, the model analyzed had good fit and was able to explain a significant and modest percentage of variance in both intrinsic job satisfaction and life satisfaction in teachers.

Effective transfer of empirical evidence on the important role of teachers' emotional resources and professional attitudes on the development and implementation of educational policies is a challenge that has not yet been fully met (Uitto et al., 2015). For this reason, future work should strive to verify the present model, as well as incorporate other key variables and resources to promote teacher well-being.

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