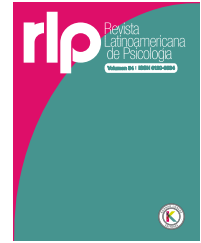# Revista Latinoamericana de Psicología

Association between teachers' resilience and emotional intelligence during the COVID-19 outbreak

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Abstract   Introduction/Objective: The resilience and emotional intelligence of teachers are crucial in order to face the daily educational challenges. To determine the association between teacher's emotional intelligence and resilience during Emergency Remote Learning. **Method:** A quantitative approach and a cross-sectional predictive non-experimental design were used. Participants were 1329 teachers from Chilean schools. The WLEIS Emotional Intelligence Scale and the RS-14 resilience scale were used. Spearman correlation analyses and Yuen's test were used for the comparative analysis by sex, and in the case of comparison by specialty the one-way ANOVA test was used; multiple regressions were performed. **Results**: High levels of resilience and between medium to high emotional intelligence; significant, positive and high relationship between emotional intelligence and resilience. Both in the emotional regulation variable and in the emotional intelligence variable significant differences were found regarding sex and specialty. The results of the predictive model with all emotional intelligence variables as predictors explained 43.5% of the observed variability of resilience. **Conclusion:** During the pandemic, teachers' emotional intelligence and resilience are essential for facing the educational adversities and challenges that arise as a consequence of a context susceptible to constant and deregulatory change.

Asociación entre la resiliencia y la inteligencia emocional de docentes durante el brote de COVID-19

Resumen   Introducción/Objetivo: La resiliencia y la inteligencia emocional de los profesores son cruciales para afrontar los retos educativos diarios. Determinar la asociación entre la inteligencia emocional de los profesores y la resiliencia durante la enseñanza remota de emergencia. **Método:** Se utilizó un enfoque cuantitativo y un diseño no experimental predic-

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tivo transversal. Los participantes fueron 1329 profesores de escuelas chilenas. Se utilizó la escala de inteligencia emocional WLEIS y la escala de resiliencia RS-14. Se utilizaron análisis de correlación de Spearman y la prueba de Yuen para el análisis comparativo por sexo, y en el caso de la comparación por especialidad se utilizó la prueba ANOVA de una vía; se realizaron regresiones múltiples. **Resultados**: Los resultados mostraron niveles altos de resiliencia y entre media y alta inteligencia emocional; relación significativa, positiva y alta entre inteligencia emocional y resiliencia; tanto en la variable de regulación emocional como en la inteligencia emocional se encontraron diferencias significativas respecto al sexo y la especialidad. Los resultados del modelo predictivo con todas las variables de inteligencia emocional como predictores explicaron el 43,5% de la variabilidad observada de la resiliencia. **Conclusión**: Durante la pandemia, la inteligencia emocional y la resiliencia de los profesores son esenciales para afrontar las adversidades y los retos educativos que surgen como consecuencia de un contexto susceptible de cambios constantes y desreguladores.

Historically, the emotional, cognitive and physical conduct of teachers has generated an increase in stress and burnout (Shukla & Trivedi, 2008); as well as alterations in mental health (Carlotto & Câmara, 2015). There are multiple studies linking teaching to burnout syndrome (Tabares-Díaz et al., 2020), depression (Mendes-Rodrigues et al., 2020) and emotional exhaustion. Even before the COVID-19 pandemic, several studies pointed to emotional intelligence and resilience as protective factors for chronic stress in teachers (Yin et al., 2019).

Since the beginning of the COVID-19 pandemic, face-to-face classes have converted to a modality called *Emergency Remote Teaching* (ERE), which has been maintained with different work dynamics, to which are added demands regarding the use of technologies (Marchant-Castillo, 2021). Despite attempts to promote hybrid models that combine face-to-face education with less school attendance, this format implies great challenges for teachers (Blanco & Blanco, 2021). Although teachers have gained experience in remote teaching, the indefinite nature of the pandemic has made it necessary to rethink educational practices considering the closing or opening of school cycles.

In this regard, it should be noted that prior to the pandemic, the demands placed on teachers in recent years had increased, in many cases emotional fatigue, exhaustion, professional burnout, among other difficulties that lead to job dissatisfaction (Reynoso-González, et al., 2020). In this sense, Blanco and Blanco (2021) point out that the extension of the new modality of education is causing anxiety, stress and depression, psychological effects that unbalance behaviour and generate a diversity of conflicts within teachers.

The pandemic has emotionally affected teachers in terms of the burdens and pressures that have been generated as a result of the lockdown (Buitrago & Molina, 2021). Teaching requires that teachers have high levels of sensitivity to their own emotions and to those of their students, considering them as those that facilitate a better quality of interpersonal relationships, and in turn, constitute the necessary element for the improvement of the teaching-learning processes (Costa-Rodríguez et al. 2021; Cornejo-Chávez et al. 2021).

Therefore, the promotion of positive emotions allows better relationships between teachers and students, as well as a better adaptation towards the implementation of new teaching strategies in a health emergency situation (Alvarado, 2021).

In order to promote positive emotions, emotional intelligence is essential, a skill that has been described as the perception, facilitation, understanding and emotional regulation on a personal level and on others (Mayer et al., 2016; Salovey & Mayer, 1990). On an educational level, emotional intelligence can explain the level of occupational and teaching commitment of teachers (Mérida-López & Extremera, 2020). During the pandemic, the development of positive emotions has been a necessity since they facilitate learning, have an adaptive function, affect the areas of physical and mental health, and in turn pay special attention to the academic, training and work aspects related to new teaching and learning strategies (Costa-Rodríguez et al., 2021; Marchant-Castillo, 2021).

Emotional behaviour patterns can be observed in the context of professional teaching practice where the classroom climate depends on the level of emotional intelligence that teachers manifest; that is, to the extent to which teachers learn to generate, regulate and maintain positive emotional states, they will reduce the impact of negative emotional states and will form students who are emotionally more prepared, willing and able to better face conflicts in the educational context (Costa-Rodríguez et al., 2021). However, when teachers present imbalances as a result of poor emotional regulation, their behaviours translate into low performance and virtual educational practices that are not consistent with planning, implementation and evaluation processes (Alvarado, 2021).

Currently, teachers do not have strategies for attending students who have communication or connectivity difficulties, phrases such as *"I have no strategies", "I do not know what to do", "something will be done,* are teacher evaluations evidenced in the virtual setting (Jiménez-Consuegra et al., 2021). This situation prevents teachers from diversifying their teaching methods and processes. To do so implies more work, to spend more time and more fatigue (Ramos-Huenteo et al., 2020).

In a scenario fraught with difficulties and uncertainties for all the actors in the teaching-learning process, it is necessary to have the ability to overcome circumstances and face adversities, expressly, the teachers' ability to be resilient. In this regard, the *American Psychological Association* defines resilience as the successful adaptation to difficult or challenging life experiences by way of mental, emotional and behavioural flexibility and implies adjusting to both internal and external demands (APA, 2021).

Resilience in teachers has been studied at different educational levels and contexts. These studies have highlighted the role of resilience as a desired skill in teachers (Fan et al., 2021) since there is a strong relationship between this concept and so-called burnout or academic stress. In fact, some studies have found that resilience reduces the vulnerability of teachers to academic stress (De Vera & Gabar, 2020). Resilience in the academic context of a pandemic has also been addressed in different studies, being associated with job burnout (Liu et al., 2021) and psychological well-being, it has even been associated with so-called technostress (Sungwon & Jiyoung, 2021). In all cases, teachers who show higher levels of resilience denote more adequate scores on psychological and school indicators. Some studies that link resilience with emotional intelligence in teachers, both quantitatively (Kamboj & Garg, 2021) and qualitatively (Throuvala et al., 2021), have concluded that such constructs are positively associated. In fact, a study on training teachers confirmed that emotional intelligence, self-efficacy, and subjective well-being are variables that explain the different levels of resilience (Ngui & Lay, 2020).

While, prior to the pandemic, the antecedents presented showed the value of emotional intelligence and resilience in the daily interaction between people in schools, during the pandemic there is little evidence regarding how levels of emotional intelligence, gender, and type of specialty are associated with teacher resilience. This study will contribute to clarifying the relationships between emotional intelligence, resilience, gender and area of knowledge; likewise, it is a central antecedent for the design of psychoeducational interventions aimed at fostering the assessment, use and regulation of emotions, as well as the capacity for resilience in the face of traumatic and destabilising circumstances.

The aim of this study is to determine the association between the emotional intelligence and resilience of teachers during the health emergency due to the COVID-19 outbreak. Specifically, this study seeks: (1) To estimate the relationship between resilience and emotional intelligence; (2) To determine differences in resilience and emotional intelligence according to sex and specialty and (3) To determine the association between resilience and teachers' emotional intelligence.

Method

This research is quantitative and has a non-experimental, predictive cross-sectional design (Ato et al., 2013).

Participants

The sample was for convenience and accessibility, composed of 1329 teachers from schools in the southern area of Chile, the mean age was 41.43 (*SD* = 11.35) years, 269 (20.2%) were men and 1060 (79.8%) were women. Regarding the educational level of the teachers, 1131 (85.1%) had only undergraduate studies and 198 (14.9%) had postgraduate studies. In relation to the specialty, 55 (4.1%) majored in Pedagogy in Arts and Music, 55 (4.1%) in Pedagogy in Sciences, 379 (28.5%) in Pedagogy in Early Childhood Education, 123 (9.3%) in Pedagogy in Philosophy and Religion, 69 (5.2%) in Pedagogy in History, Geography and Social Sciences, 73 (5.5%) in Pedagogy in Languages, 324 (24.4%) in Pedagogy in Language, Communication and/or Spanish and 251 (18.9%) in Pedagogy in Mathematics and Computer Science.

Instruments

Emotional intelligence: To measure emotional intelligence, the first version translated into Spanish (Extremera et al., 2019) of the WLEIS Emotional Intelligence Scale (Wong & Law, 2002) was used. It is a self-report scale of 16 items that measures 4 dimensions of emotional intelligence (Self-Emotional Appraisal, Others' Emotion Appraisal, Use of Emotion, Regulation of Emotions). It is based on a Likert-type response scale with seven options ranging from 1 (totally disagree) to 7 (totally agree). The dimension of Emotional Intelligence was generated by averaging response values for each factor item. The scores were obtained by means of categories: "high" (score ≥ 6), "medium" (score ≥ 3.1 and ≤ 5.9) and "low" (score ≤ 3). This scale presented adequate psychometric properties ($\alpha < .70$). An example of an item is: *I have a good understanding of my own emotions.*

Resilience: To measure resilience, the first adaptation into Spanish (Sánchez-Teruel & Robles-Bello, 2015) of the original Resilience Scale (RS-14) (Wagnild, 2009) was used. It is based on a Likert-type response scale with seven options ranging from 1 (totally disagree) to 7 (totally agree). Higher scores indicate higher levels of resilience. Scores are calculated using a sum of the response values for each item, scores between 98-82 = Very high resilience; 81-64 = High resilience; 63-49 = Normal; 48-31 = Low; e 30-14 = Very low (Wagnild, 2009). This unifactorial scale showed adequate psychometric properties ($\alpha = 0.79$). An example of an item is: *I usually manage difficult situations, one way or another.*

Data collection. To collect the data, the ethical standards for research with human beings were considered throughout the whole research process. Authorisations were obtained from the Municipal Educational Directorates of each commune, responsible for public educational establishments in order to apply the instruments by means of a link using the Surveymonkey platform. This link was distributed by means of emails to teachers and provided by community coordinators of the pedagogical area. The participants signed the informed consent once they accessed the link and before answering the questionnaire. The informed consent specified ethical principles such as voluntary and anonymous participation and stated that there were no consequences for the physical and psychological integrity of the participants, among others.

Data análisis. For data analysis, Software R version 4.0.3 was used, with ideRStudio version 1.3.959. Nortest, lmtest, rstatix and WRS2 packages were used. First, descriptive data such as percentages, means, standard deviation, skewness and kurtosis were analysed.

In order to address specific objective number one and estimate the relationship between the variables, the normality of the data was explored. The Kolmogorov-Smirnov test was performed with the Lilliefors modification in order to verify the normality in the distribution of the variables age, resilience and emotional intelligence dimensions. The results showed that in all cases $p < .001$, so it is assumed that none of the distributions are normal. Therefore, the Spearman correlation test was performed.

To address specific objective two and determine the differences in resilience and emotional intelligence according to sex and specialty, the assumptions of normality and homoscedasticity were tested. When exploring the normality of the data by means of Kolmogorov-Smirnov, no normality ($p < .001$) was observed in the distributions by sex or by specialty. In addition, the Levene test was not significant regarding sex for each variable ($p > .05$), nor by specialty ($p > .05$) for which there is no evidence of lack of homoscedasticity. Due to the non-fulfillment of assumptions for the performance of parametric tests and the presence of outliers, it was decided to carry out robust tests, in the case of the comparison by sex, the Yuen test was used and in the case of the comparison by specialty, the one-way ANOVA of trimmed means test was used (Wilcox, 2012).

To address specific objective three and determine the association between teachers' resilience and emotional intelligence, multiple regressions were performed. First, the assumptions were checked. Regarding the normality of the residuals, the Lillitest was significant, $p < .001$, but the visual analysis of the graphs showed an acceptable distribution. The Breusch-Pagan homoscedasticity test was significant at $p < .01$. There are no predictors showing a very high linear correlation or variance inflation, the VIF values range from 1.55 to 1.70. The Durbin Watson test was not significant, so there is no evidence of auto-correlation $p = .75$.

Results

Table 1 shows resilience at a high level ($M = 74.37$; $SD = 24.55$) and emotional intelligence showed scores between medium and high; the *use of emotion* dimension being the highest ($M = 6.02$; $SD = 0.96$) and *regulation of emotions* the medium ($M = 5.64$; $SD = 1.06$).

Correlational analysis. As can be seen on Table 2, significant positive moderate to high correlations were found between all the dimensions that make up the WLEIS ($r = .38$ to $r = .72$). Significant positive and low age correlations were also observed with emotional intelligence ($r = .17$) and with resilience ($r = .13$). Finally, the relationship of emotional intelligence with resilience was significant, positive and high ($r = .64$).

Differences between resilience and emotional intelligence with regard to sex and disciplinary area

To determine the differences in resilience and emotional intelligence according to sex and specialty, multiple comparisons were made. Table 3 shows that there are statistically significant differences between men and women in all variables, except for total emotional intelligence ($p > .05$).

Comparison by specialty

For the comparison by specialty, a one-way ANOVA (trimmed means) test was performed (Wilcox, 2012), which was significant for the resilience variables $F_{(7,176.49)} = 2.35$, $p < .05$ $ES = 0.19$, *regulation of emotions* variables $F_{(7,175.67)} = 3.82$, $p < .001$, $ES = 0.22$ and *use of emotion* variables $F_{(7,180.08)} = 2.50$, $p < .05$, $ES = .23$. Therefore, post-hoc tests were carried out on these variables in order to identify the specialties of the teachers that present differences. For the resilience variable, the Lincon post-hoc test indicates that there are significant differences for Pedagogy in Language, Communication and/or Spanish vs. Pedagogy in Mathematics and Computer Science ($p < .05$), see Table 4.

For the *regulation of emotions* variable, the Lincon post-hoc test indicates that there are significant differences between the specialties Pedagogy in Languages vs. Pedagogy in Language, Communication and/or Spanish ($p < .01$).

For the *use of emotion* variable, the Lincon post-hoc test indicates that there are significant differences between the specialties Pedagogy in Languages vs. Pedagogy in Language, Communication and/or Spanish ($p < .01$), Pedagogy in History, Geography and Social Sciences vs Pedagogy in

Table 1. Normality test by variable and grouped by sex

	M	DE	K-S (Lilliefors)	M	SD	K-S (Lilliefors)	M	SD	K-S (Lilliefors)
				Men			**Women**		
Age	41.42	11.40	D = 0.136 ***						
Resilience	81.58	8.50	D = 0.104 ***	82.62	8.30	D = 0.091 ***	81.32	8.53	D = 0.096 ***
Total emotional intelligence	5.83	0.81	D = 0.110 ***	5.93	0.59	D = 0.107 ***	5.89	0.55	D = 0.114 ***
Self-Emotional Appraisal	5.79	1.02	D = 0.189 ***	5.84	0.72	D = 0.141 ***	6.00	0.66	D = 0.150 ***
Others' Emotion Appraisal	5.86	0.90	D = 0.156 ***	6.04	0.69	D = 0.111 ***	5.90	0.75	D = 0.111 ***
Use of Emotion	6.02	0.96	D = 0.183 ***	6.01	0.79	D = 0.164 ***	5.72	0.81	D = 0.145 ***
Regulation of Emotions	5.64	1.06	D = 0.156 ***	6.26	0.65	D = 0.189 ***	6.12	0.69	D = 0.116 ***

**$p < 0.05$, **$p < 0.01$, **$p < .001.001$

Table 2. Correlations between age, emotional intelligence and resilience

	M	DE	1	2	3	4	5	6	7
Age	41.42	11.40	1						
Resilience	81.58	8.50	.13***	1					
Total emotional intelligence	5.83	0.81	.17***	.64***	1				
Self-Emotional Appraisal	5.79	1.02	.20***	.57***	.75***	1			
Others' Emotion Appraisal	5.86	0.90	.06*	.33***	.58***	.45***	1		
Use of Emotion	6.02	0.96	.12***	.58***	.70***	.55***	.43***	1	
Regulation of Emotions	5.64	1.06	.13***	.53***	.72***	.60***	.38***	.52***	1

*$p < .05$ **$p < .01$ ***$p < .001$

Table 3. Means and standard deviation of the dimensions of emotional intelligence and resilience, according to sex

Factors	Men		Women		Yuen	AKP
	M	SD	M	SD		
Resilience	82.62	8.30	81.32	8.53	2.03 (232.64) *	0.158117
Emotional intelligence	5.93	0.59	5.89	0.55	1.49 (242.66)	-
Others' Emotion Appraisal	5.84	0.72	6.00	0.66	2.56 (226.04) *	0.204784
Self-Emotional Appraisal	6.04	0.69	5.90	0.75	2.29 (249.94) *	0.167023
Regulation of Emotions	6.01	0.79	5.72	0.81	6.27 (257.93) ***	0.4474549
Use of Emotion	6.26	0.65	6.12	0.69	2.88 (309.64) **	0.1819249

Note: AKP = effect size test. *$p < .05$, **$p < .01$, ***$p < .001$

Languages ($p < .05$) and Pedagogy in Early Childhood Education vs. Pedagogy in Languages ($p < .05$).

Association between resilience and emotional intelligence

Multiple regressions were performed considering the different dimensions of emotional intelligence on resilience as predictor variables. The dimension *others' emotion ap-* *praisal* was not a significant predictor ($p > .05$). The *use of emotions* factor presented the greatest weight ($\beta = .36$), followed by *self-emotional appraisal* ($\beta = .27$) and *regulation of emotions* ($\beta = .14$). The most important predictor was *use of emotions*.

Table 5 shows the results of the model with all the predictor variables, which has an adjusted $R2 = .4347$, that is, it is capable of explaining 43.5% of the observed variability of resilience. The p-value of the model is significant ($p < .001$) so it can be accepted that the model is not by chance, that

Table 4. Means and standard deviation of the dimensions of emotional intelligence and resilience, according to specialty

	Arts and Music	Sciences	Early Childhood Education	Philosophy and Religion	History, Geography and Social Sciences	Languages	Language, Communication and/ or Spanish	Mathematics and Computer Science	ANOVA trimmed means
Resilience	82.57 (8.78)	82.22 (7.19)	81.59 (8.43)	82.19 (7.85)	80.48 (8.80)	83.21 (8.39)	80.34 (8.94)	82.34 (8.34)	$F(7,176.5) = 2.35, p = 0.03$
Emotional intelligence	5.95 (0.55)	5.97 (0.47)	5.86 (0.55)	5.94 (0.57)	5.77 (0.61)	5.93 (0.65)	5.90 (0.54)	5.95 (0.55)	$F(7,174.3) = 1.30, p = 0.25$
Others' Emotion Appraisal	5.85 (0.63)	5.90 (0.63)	5.93 (0.70)	6.00 (0.68)	5.83 (0.71)	5.80 (0.72)	6.08 (0.65)	6.00 (0.66)	$F(7,174.9) = 2.01, p = 0.06$
Self-Emotional Appraisal	6.03 (0.75)	6.00 (0.68)	5.90 (0.75)	5.94 (0.76)	5.83 (0.76)	5.99 (0.78)	5.86 (0.75)	6.04 (0.68)	$F(7,176.7) = 1.87, p = 0.17$
Regulation of Emotions	5.88 (0.82)	5.95 (0.73)	5.77 (0.83)	5.75 (0.79)	5.74 (0.81)	5.98 (0.82)	5.67 (0.80)	5.84 (0.83)	$F(7,175.7) = 3.82, p < 0.001$
Use of Emotion	6.19 (0.62)	6.19 (0.70)	6.12 (0.71)	6.17 (0.64)	6.07 (0.69)	6.43 (0.60)	6.12 (0.69)	6.16 (0.70)	$F(7,180.1) = 2.50, p = 0.02$

Table 5. Multiple regression model of the dimensions of emotional intelligence and resilience

Predictor	b	b 95% CI[LL, UL]	beta	beta 95% CI [LL, UL]	sr2	sr2 95% CI [LL, UL]	r	Adjustment
(Intercept)	26.74**	[23.30, 30.19]						
Self-Emotional Appraisal	3.19**	[2.57, 3.82]	0.27	[0.22, 0.33]	.04	[.03, .06]	.55**	R2 = .433**
Use of Emotion	4.47**	[3.84, 5.10]	0.36	[0.31, 0.41]	.09	[.06, .11]	.58**	95% CI [.39,.47]
Regulation of Emotions	1.46**	[0.90, 2.02]	0.14	[0.09, 0.19]	.01	[.00, .02]	.50**	

Note. A significant *b*-weight indicates that the beta weight and semi-partial correlation are also significant. *b* represents the non-standardised regression weights. beta indicates the standardised regression weights. *sr*2 represents the squared semi-partial correlation. *r* represents the zero-order correlation. LL and UL indicate the lower and upper limits of a confidence interval, respectively. *p < .05. **p < 0.01.

is, that at least one of the partial regression coefficients is different from 0. Many of them are not significant, which is an indication that they might not contribute to the model; for this reason, a mixed stepwise strategy was used. In this sense, the Akaike Criterion (AIC) was used to assess the parsimony of the model.

Discussion

The objective of this research was to determine the association between emotional intelligence and resilience in teachers during the health emergency due to the COVID-19 pandemic. The results are discussed below, implications, limitations are specified and future lines of research are outlined.

Relationship between resilience and emotional intelligence

The detection of high levels of resilience in the teaching staff, confirms the capacity to face adversity or uncertainty in the execution of their work. This is a crucial aspect to consider, since emergency remote teaching presents a series of problems and challenges that have required emerging solutions. For example, Jiménez-Consuegra et al. (2021) mention that teachers while addressing problems such as null connectivity of students deploy communication strategies by means of email, making a phone call or sending a message via *WhatsApp* to the student. However, a large number of teachers report not having a route to provide a solution. This issue requires that teachers activate, create and implement effective educational actions in everyday situations.

Despite emotional intelligence presenting levels between high and medium, the *regulation of emotions* factor was significantly lower, indicating greater difficulty in managing or modulating emotions appropriately. Emotional intelligence is related to teaching practice and its performance by way of the personal characteristics of the teaching staff, including the emotional management of others, relationship skills and impulsivity control, as those that predict optimal performance at work, become relevant, the adaptation to changes and self-motivation being where

women have better scores than men (Cejudo & López-Delgado, 2017). This result is important given that during ERE the greatest current concern seems to be directed towards the mental and emotional balance of teachers, who until now have managed to work in a sustained way, sometimes showing fatigue or tiredness in the virtual modality of learning (Ramos-Huenteo et al., 2020). In addition, it is necessary to consider that the forced changes in the way of teaching and interacting with students has led to experiencing multiple emotions that must be regulated (Buitrago & Molina, 2021).

Significant relationships were observed between resilience scores and the different dimensions of emotional intelligence. In all cases, the association between variables was positive, indicating that, as the emotional intelligence of teachers increased, their level of resilience also increased. Furthermore, the strength of correlation in all cases was between medium and high. These results are similar to those reported by Kamboj and Garg (2021) and Throuvala et al. (2021), who confirmed a positive association between resilience and emotional intelligence. In this same process, a significant association was detected between the study variables and the age of the teachers. Although the coefficients could be considered low (*r* = .06 to *r* = .20), they indicate that the values of resilience and emotional intelligence tend to increase with an increasing age of the teachers. These results are relevant considering the current feasibility of implementing training workshops, emotional literacy, and emotional self-care to reinforce these resources and minimise the effects that ERE has had on the emotions which are very important for mental health.

Differences in resilience and emotional intelligence according to sex and specialty

In relation to the second research objective that tried to contrast the values of resilience and emotional intelligence by sex and specialty, it was interesting to observe that men showed significantly higher levels than women, both in resilience and in emotional intelligence; only in the *others' emotion appraisal* factor did women obtain a higher score. In most cases the effect size was low, indicating that the differences between the groups were small. However, in the *regulation of emotions* dimension, the magnitude of the

differences was greater. During the pandemic, the results seem to be opposite to what was found in pre-pandemic periods. A pandemic study found more self-care behaviours in men than in women (Bermejo-Martins, et al., 2021).

On the other hand, in the comparison by specialty, it was recurrent to observe that the teachers holding a major in Pedagogy in History, Geography and Social Sciences and Pedagogy in Language, Communication and/or Spanish showed the lowest scores, being in some cases significant compared to the scores of teachers of Pedagogy in Languages and Pedagogy in Mathematics and Computer Science, who in turn obtained the highest scores in most of the variables of the study. This result is consistent with those presented in a study that explored emotional intelligence in 325 teachers, specifically math and science teachers. Results showed that there were no significant differences between math and science teachers, although a higher mean value of emotional intelligence was observed in math teachers compared to science teachers. However, analysis based on individual subscales of emotional intelligence showed that there was a significant difference in emotional intelligence between math and science teachers for the *regulation of emotions* subscale (Subramaniam, & Cheong, 2008). On the other hand, the results of this research are partially consistent with those of a study with 1033 teachers in training from different areas that found that the levels of emotional intelligence of teachers with a major in Early Childhood Education and Sciences are higher than those of teachers with a major in Language, Social Studies and Mathematics (Akyol, & Akdemir, 2019). The results obtained in this research are interesting because they can guide future psychoeducational interventions by taking into account the teacher's specialty.

Association between resilience and teachers' emotional intelligence

Regarding the third objective of the study, a regression model was obtained which integrated three of the four factors of emotional intelligence as predictors of resilience. In it, the application of the *use of emotions* factor presented the greatest weight (β = .36), followed by *self-emotional appraisal* (β = .27) and *regulation of emotions* (β = .14). In this sense, 43.5% of the variance was explained (*R2* = .43), which classifies the model with a high magnitude of the effect. This result is relevant given that in the current deregulatory educational environment, the importance of an adequate management of emotions increases; negative emotions such as fear generate anxiety when they appear in a sustained manner since they can trigger stress and/or depression (PAHO, 2021; Bermejo-Martins, et al., 2021). In that sense, a study has affirmed that the ability to regulate emotions and exhaustion appear to be linked (Fiorilli et al., 2017). Also, emotional intelligence and self-care during the COVID-19 pandemic have been identified as influencing protective factors in perceived stress (Bermejo-Martins, et al., 2021). Despite the importance of emotions in the educational field in the Chilean context being recognized, little work has been done on both the initial training and continuous training of teachers (Barría-Herrera et al., 2021).

Limitations and future research

One of the limitations of this study is that the information obtained comes from self-reports, which may imply a social desirability bias or a lack of absolute veracity in the responses. In addition, given that the sample was conveniently constituted, it was not possible to make some additional comparisons on sociodemographic characteristics of the teachers that could be associated with both levels of emotional intelligence and resilience. In this regard, future studies could consider aspects related to the family constitution of the teaching staff, marital status, having or not having children and socioeconomic status, without forgetting the assessment of perceived family support that could be reflected in their ability to be resilient.

Theoretical and practical implications of the study, practical implications

The results of this research have theoretical and practical implications: (1) They show the importance of strengthening the work with teachers' emotional intelligence, since it is very important for resilience and is recognised as a protective factor of mental health; (2) Considering that Sociocognitive Theory recognises the responsibility of teachers as "role models", it is a priority to promote emotional regulation and, in general, the emotional skills of teachers; and (3) They could guide the design of post-pandemic interventions with the objective of promoting emotional skills that favour emotional intelligence and resilience.

Conclusion

The emotional intelligence and resilience of teachers are associated, and relevant for facing adversities and educational challenges that arise as a consequence of a context susceptible to constant changes and deregulation, such as the COVID-19 pandemic. Emotionally intelligent teachers will show greater resilience and cope with everyday situations more effectively. The results of this study have implications for teacher training given the importance of developing interventions for practicing professionals, and also for the training of future teachers (Turner & Stough, 2020).

Acknowledgments

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