Teacher Dispositional Affectivity, Emotional Labor, and Self-Efficacy: A Longitudinal Analysis

Irena Burić[a] & Mirta Mornar[b]

[a] Department of Psychology, University of Zadar, Croatia

[b] Institute for Social Research in Zagreb, Croatia

Corresponding author:

Irena Burić
Department of Psychology, University of Zadar,
Obala kralja Petra Krešimira IV., br. 2
23000 Zadar
Croatia

E-mail: iburic@unizd.hr

Declarations

Funding
This research was supported by Croatian Science Foundation (Grant No. UIP-11-2013-5065).

Conflicts of interest/Competing interests
There are no conflicts of interest to declare.

Availability of data and material
All data and materials are available on request from the first author.

Code availability
All codes are available on request from the first author.

Authors' contributions
Irena Burić: Conceptualization, Investigation, Writing, Methodology, Formal Analysis, Writing, Reviewing & Editing, Funding Acquisition
Mirta Mornar: Conceptualization, Investigation, Writing, Reviewing & Editing

Ethics approval
The research was approved by the Ethics committee of the Department of Psychology of University of Zadar, Croatia.

Consent to participate
All participants signed an informed consent with all important information about the research stated.

Consent for publication
All participants signed that they are aware that all data will be published on a group level.

Abstract

The aim of the study was to test the longitudinal reciprocal relationship between teachers' emotional labor strategies (i.e., deep acting, hiding emotions, and faking emotions) and teachers' self-efficacy (TSE). Additionally, due to a scarcity of the empirical research on teachers' stable individual differences that can explain teachers' emotion regulation and motivation, the role of teachers' dispositional affectivity (i.e., positive affectivity – PA and negative affectivity – NA) in predicting individual differences in teachers' use of emotional labor strategies and TSE was examined. A large sample of 3010 Croatian teachers (82% female) with varying years of teaching experiences (M=15.28, SD=10.50) participated in a three-wave longitudinal study. The results showed that TSE and hiding emotions were reciprocally related to each other even after controlling for dispositional affectivity – hiding emotions at Time 2 was related to lower levels of TSE at Time 3 and vice versa. Next, PA positively predicted TSE at both Time 2 and Time 3, but negatively hiding and faking emotions at Time 2. In addition, PA positively predicted deep acting only at Time 2. In contrast, NA positively predicted surface acting at Time 2 and Time 3, and negatively TSE, but only at Time 1.

Key words: teachers, dispositional affectivity, emotional labor, self-efficacy, longitudinal design

Teacher Dispositional Affectivity, Emotional Labor, and Self-Efficacy: A Longitudinal Analysis

Introduction

While teaching and interacting with students, teachers often engage in emotional labor, that is, they deliberately manage their emotional displays as part of their work role (Ashforth & Humphrey, 1993; Grandey, 2000). Emotional expressions of many professionals who work in direct service roles are bounded by so called 'emotional display rules' that prescribe which emotions should be expressed and which emotions should be suppressed in a certain situation (Ekman et al., 1969). When it comes to the emotional display rules of the teaching profession, it is believed that teachers are most often required to express positive emotions and suppress negative ones, but also to keep their emotions at moderate levels of intensity (Sutton et al., 2009; Taxer & Frenzel, 2015; Yin, 2016). For example, teachers are expected to react with joy and enthusiasm when students perform well and hide or suppress emotions such as sadness or frustration when students are not making progress. Therefore, in order to comply with the emotional display rules of their profession, teachers sometimes have to regulate internal and expressive components of their emotions, that is, they have to perform emotional labor (Grandey, 2000; Yin & Lee, 2012; Taxer & Frenzel, 2015).

Studies on teacher emotional labor have been on the rise during the last years and showed that ways in which teachers regulate their emotions are related to teaching quality and students' outcomes (Burić, 2019; Burić & Frenzel, 2021) as well as to teachers' psychological well-being (Lee, 2019; Wang et al., 2019; Yin et al., 2019). However, most of this research was based on cross-sectional design and rarely used teachers' motivational variables as possible outcomes (Yin et al., 2019). Therefore, in the present study, we investigated a longitudinal relationship between teachers' emotional labor and teachers' self-

efficacy (TSE), which is considered as one of the most important and most extensively researched constructs in the field of teacher motivation (Zee & Koomen, 2016).

TSE and emotional labor are of crucial importance for predicting teaching effectiveness and well-being (Klassen & Tze, 2014; Zee & Koomen, 2016; Wang et al., 2019; Yin et al., 2019). Exploring whether TSE predicts emotional labor, whether emotional labor predicts TSE, or whether the longitudinal association between TSE and emotional labor is reciprocal in its nature, is of great importance, not only from the theoretical point of view, but also from the practical perspective. For example, if emotional labor predicts TSE, teachers can be encouraged and trained to use those emotional labor strategies that will enhance their TSE and, consequently, their professional well-being and teaching effectiveness. If, on the other side, TSE predicts emotional labor, to preserve desirable and prevent undesirable effects of certain emotional labor strategies on teacher well-being and performance, efforts could be made to enhance TSE.

Additionally, due to a scarcity of the empirical research on teachers' stable individual differences that can explain teachers' emotion regulation and motivation (see Wang et al., 2019), we additionally examined whether teachers' dispositional positive and negative affectivity can explain individual differences in teachers' use of emotional labor strategies and their TSE. Moreover, we tested whether the longitudinal relationship between TSE and emotional labor remains stable even after controlling for teachers' personality characteristics.

Theoretical and Empirical Background

Teacher Emotional Labor

To reduce the dissonance between the emotions that are felt and those that are expected to be expressed in a classroom, teachers can adopt two emotional labor strategies: deep acting, which involves managing internal feelings in order to modify their observable expressions; or surface acting, which involves directly modifying the expressed emotions by

hiding and faking them (Brotheridge & Grandey, 2002; Hochschild, 1983). By performing deep acting, teachers strive to experience desirable emotions through engaging in thoughts and activities which foster those emotions (Humphrey et al., 2015). On the other hand, surface acting does not include trying to actually experience emotions, but rather it involves suppressing feelings and/or faking the required emotional display (Humphrey et al., 2015).

A recent meta-analysis based on research with teachers' samples indicated that engaging in surface acting is positively related to burnout and negatively to job satisfaction, while engaging in deep acting is positively related to job satisfaction (Yin et al., 2019). Similarly, another meta-analysis conducted by Wang and colleagues (2019) showed that surface acting and genuine expression of negative emotions are detrimental for teachers' psychological well-being, while genuine expression of positive emotions was found to be particularly adaptive for teachers. Interestingly, deep acting showed either mixed or nonsignificant correlations with teacher adjustment.

However, suppressing emotions and faking emotions, as two facets of surface acting, seem to be distinctly related to teacher well-being and teaching effectiveness. For example, by using longitudinal design, Burić et al. (2019) found that teachers' trait emotions are differently related to hiding and faking emotions – anger positively predicted hiding feelings and faking emotions but hiding emotions positively predicted hopelessness. Next, Burić (2019) found that faking emotions was positively related to class-perceived enthusiasm, students' intrinsic motivation and positive affect, while hiding emotions was related only to class-perceived enthusiasm and this association was negative. Similarly, Burić and Frenzel (2021) revealed that teachers' faking emotions was positively related to class-perceived instructional strategies (i.e., cognitive activation, supportive climate, classroom management) and students' engagement, while teachers' hiding emotions was negatively related to the class-perceived instructional strategies. Considering these differentiated associations between

faking and hiding emotions and indicators of teachers' well-being and effectiveness, in the present study we took a triadic approach to emotional labor by assessing teachers' deep acting and two strategies of surface acting, namely faking emotions, and hiding emotions (Lee & Brotheridge, 2011).

Teacher Self-Efficacy (TSE)

The construct of self-efficacy is grounded in the theoretical framework of social cognitive theory and refers to an individual's belief in his or her capability to succeed in a specific situation or accomplish a certain task (Bandura, 1997). TSE refers to the beliefs that teachers hold about their capability to succeed in teaching, including beliefs about their instructional capabilities, capabilities for classroom management, and capabilities for establishing meaningful relationships with students (Soodak & Podell, 1996; Tschannen-Moran & Hoy, 2001; Wheatley, 2005). According to a review of existing studies on TSE conducted by Zee and Koomen (2016), TSE was found to be relevant for outcomes at the classroom level, at the student level, and at the teacher level. At the classroom level, TSE influences the quality of classroom processes through teachers' beliefs about their ability to provide emotional and instructional support and manage students' behavior during classes. Highly efficacious teachers have been found to cope more effectively with problematic students' behaviors and establish less conflictual relationships with students. They also use more diverse instructional strategies and are more sensitive to students' needs and expectations. At the student level, TSE has proven to be positively related to students' academic achievement and motivation. Lastly, teachers' beliefs about their ability to succeed in the teaching profession are vital for their own psychological well-being – teachers with high TSE experience less job-related stress and report lower levels of burnout and higher levels of personal accomplishment, commitment to teaching, and job satisfaction.

Teacher Emotional Labor and TSE

According to the social-cognitive theory (Bandura, 1997, 2012), human functioning is reciprocally determined by personal factors (e.g., thoughts, feelings), environmental factors, and agentic behaviors, implying that emotional labor might be shaped by both personal factors and environmental conditions. Regarding the personal factors, individual differences in self-efficacy beliefs are proved to be one of the most important determinants of human behavior and performance. Since individuals with greater self-efficacy more easily overcome environmental stressors and challenges which, in turn, improves their well-being and general functioning, more positive self-efficacy beliefs should be related to exerting higher levels of effort and persistence when faced with emotional labor demands (Dahling & Johnson, 2013). Moreover, self-efficacy beliefs were found to affect the direction of one's attention, how emotions are managed, and how emotional events are perceived (Chemers et al., 2001). Therefore, it can be assumed that teachers with higher levels of TSE also possess more confidence and resources to engage in demanding strategy of deep acting in order to meet the emotional requirements of their job and genuinely feel the emotions that are expected from them. In contrast, teachers with lower levels of TSE are more likely to experience negative and undesirable emotions and consequently use superficial strategy of surface acting to hide and substitute such emotions with more desirable but faked ones.

However, emotional labor can also shape TSE. According to the social-cognitive theory (Bandura, 1997), affective and physiological states are one of the sources of teacher self-efficacy beliefs. When it comes to impact of mood on self-efficacy, negative affective states lead to lower self-efficacy, while positive affective states lead to higher self-efficacy (Kavanagh & Bower, 1985). The same effect can be observed during teaching. For example, when teaching results in negative emotions, such as when students misbehave and teachers feel frustrated, it takes a toll on their self-efficacy – they may perceive that they are not

capable to maintain order in the classroom and consequently feel that they are not successful as teachers.

Conceptually, deep acting is similar to reappraisal (i.e., construing an emotion-eliciting situation in a way that changes its emotional impact) and surface acting is similar to suppression (i.e., inhibiting ongoing emotion-expressive behavior; Grandey & Melloy, 2017; John & Gross, 2004). Therefore, when individuals engage in deep acting, they change the emotion they felt. For example, teachers may effortfully try to change their view on students' misbehavior in classroom by shifting the attributed causes of such behavior from deliberate inattention and violation of classroom rules to tiredness and childish nature of their students. As a result, teachers' upsurging anger is blocked and possibly even turned into sympathy. In contrast, surface acting or suppression does not change the felt emotion, but rather it changes only its outward expression (e.g., a teacher may choose to hide frustration caused by slow progress of certain students but continues to feel it). As a result, teachers who engage in deep acting may modify their feelings from negative into positive ones which can positively impact on their TSE. However, negative emotions of teachers who rely on surface acting stay intact and consequently reduce their TSE. Therefore, it can be expected that teachers' emotional labor and TSE are most likely reciprocally related to each other.

Indeed, previous studies found that deep acting was positively related to teacher efficacy for instructional strategies, classroom management, and student engagement, while surface acting was negatively related to all three dimensions of TSE (Yin et al., 2017). Taxer and Frenzel (2015) found that TSE was positively related to genuine expression of positive emotions and negatively related to hiding negative emotions, indicating that surface acting as an emotional labor strategy could be related to lower TSE. On the other hand, Sahin (2015) found a positive relationship between self-efficacy and deep acting in teacher candidates, which suggests that both deep acting and surface acting are related to TSE. Furthermore, Lee

and Van Vlack (2018) suggest that the relationship between emotional labor and TSE could be mediated by experienced emotions – deep acting is related to experiencing positive emotions, which in turn increases TSE, while surface acting is related to experiencing negative emotions, which in turn decreases TSE. Based on theoretical considerations outlined above and available empirical findings that mostly stem from cross-sectional studies, we hypothesized:

H1: Teachers' emotional labor and TSE will be reciprocally related to each other – TSE will positively predict deep acting and negatively hiding and faking emotions over time. On the other side, deep acting will positively predict TSE while hiding and faking emotions will negatively predict TSE over time.

Teachers' Emotional Labor and TSE: The Role of Dispositional Affectivity

Dispositional affectivity refers to individual differences in predispositions to experience certain affective states and emotions. According to Cropanzano et al. (1993), research on personality has shown that there are two general dimensions when it comes to affective responding at work – positive affectivity and negative affectivity (Watson & Clark, 1984). These dimensions are orthogonal, which means that a person can be high on both dimensions, low on both dimensions, or high on one and low on the other (Diener & Emmons, 1985). Positive affectivity (PA) reflects individuals' predispositions to experience positive emotional states, such as joy, enthusiasm, and optimism. Individuals who are high on PA tend to be active, joyful, energetic, and lively, whereas those who are low on PA tend to be the opposite – lethargic, drowsy and sluggish (Watson & Clark, 1984). On the other hand, negative affectivity (NA) represents the extent to which an individual feels and expresses negative emotions. People who are high on NA tend to be anxious, angry, and afraid, whereas those who are low on NA tend to be calm and relaxed (Watson & Clark, 1984). While both PA and NA are related to broader personality dimensions such as extraversion and

neuroticism (Watson et al. 1999), dispositional affectivity concerns solely the affective aspect of personality, which is why it is essential to consider it when discussing teachers' emotional lives.

According to the behavioral concordance model (Moskowitz & Côté, 1995), traits predispose people to regulate their emotional displays by using those strategies that are congruent with their broad dispositional tendencies (e.g., PA and NA). Accordingly, individuals with high PA, who tend to experience positive emotions, are more likely to use deep acting which is congruent with their felt positive emotions. In contrast, individuals with high NA, who typically experience negative emotions, may view attempts to experience positive feelings as trait-incongruent and thus rely on surface acting (Dahling & Johnson, 2013). Therefore, it can be expected that teachers with higher scores on PA will tend to use deep acting to regulate their emotions since this strategy is more congruent with positive emotions they usually experience. On contrary, teachers with higher scores on NA will tend to use surface acting since this strategy is more congruent with negative emotions they typically experience. Moreover, individuals with high PA are more likely to view emotional display rules as mandating the expression of positive emotions while those with high NA are more likely to perceive the emotional display rules as mandating the suppression of negative emotions (Kammeyer-Mueller et al., 2013; Schaubroeck & Jones, 2000), which makes them more prone to deep acting and surface acting, respectively.

Dispositional affectivity has been found to play an important role in managing emotions and emotional demands at work (Abraham, 1999) and has so far been explored mostly as an antecedent of emotional labor (Kammeyer-Mueller et al., 2013). Research has consistently shown that employees with high NA are more likely to surface act, while those with high PA are more likely to deep act (Bono & Vey, 2005; Humphrey et al., 2015; Kammeyer-Mueller et al., 2013; Schaubroeck & Jones, 2000). Studies that examined

teachers' dispositions and emotional labor strategies are still scarce. Nonetheless, the available research indicates that teachers' tendency to typically experience positive emotions is positively related to deep acting while teachers' tendency to typically experience negative emotions is related to surface acting (Burić et al., 2019; Lee et al., 2016; Karim & Weisz, 2011).

Regarding the dispositional affectivity and TSE, their relationship can be explained by the proposition that affective traits are likely to be manifest in affective states (Kanfer & Heggestad, 1997). Therefore, in accordance with the social-cognitive theory (Bandura, 1997, 2012) and available research on the role of affect in forming self-efficacy beliefs (e.g., Kavanagh & Bower, 1985), it can be assumed that teachers high in PA will tend to experience positive affective states at work which will further enhance their TSE. In contrast, teachers high in NA will more likely experience negative emotion which can, in turn, dampen their self-efficacy beliefs. The importance of stable dispositional affectivity in explaining self-efficacy as rather malleable construct (Mitchell & Gist, 1985) has been demonstrated empirically as well (e.g., Gerhardt & Brown, 2006; Manning et al., 2018). Thus, we formulated the following hypothesis:

H2: Teacher dispositional affectivity will predict emotional labor and TSE – PA will positively predict deep acting and TSE, while NA will positively predict hiding and faking emotions.

Lastly, we tested whether reciprocal relationship between emotional labor and TSE would hold even after controlling for teachers' dispositional affectivity. Compared to emotional labor and TSE that are more malleable and to a greater extent determined by contextual characteristics (Beal & Trougakos, 2013; Grandey & Gabriel, 2015; Mitchell & Gist, 1995), dispositional affectivity is a rather stable trait that efficiently explains job-related outcomes (Cropanzano et al., 1993; Diener et al., 2002). Thus, finding that reciprocal

relationship between emotional labor and TSE is stable even after controlling for PA and NA, can point to the possibility for effortful and positive changes in teachers' professional functioning above and despite teachers' stable dispositional characteristics. Accordingly, we hypothesized:

H3: Emotional labor and TSE will be reciprocally related to each other even after controlling for dispositional affectivity.

The Present Study

Research on the relationship between teachers' emotional labor and TSE remains scant and based almost completely on cross-sectional data (Yin et al., 2019). In addition, studies that examine teachers' individual differences that can explain both constructs are largely missing. Considering the importance of TSE and emotional labor in explaining teachers' professional well-being and teaching effectiveness (Klassen & Tze, 2014; Wang et al., 2019; Yin et al., 2019; Zee & Koomen, 2016), gaining insight into the reciprocity of their relationship is valuable. For example, establishing that different emotional labor strategies distinctly predict TSE can be used to promote teachers' reliance on emotion regulation strategies that would be more adaptive in terms of their motivation and psychological well-being. Similarly, finding that higher TSE indeed predicts more deep acting and lower TSE predicts more surface acting can emphasize the importance of boosting TSE to preserve teachers' well-being and performance also via emotional processes. Therefore, the main goal of the present longitudinal study was to examine whether teachers' emotional labor strategies (i.e., deep acting, hiding emotions, and faking emotions) and TSE are reciprocally related to each other. Even though available and mostly cross-sectional studies suggest positive association between TSE and deep acting and negative association between TSE and surface acting, our knowledge regarding the direction of these associations is still mostly theoretical. Thus, we argue that it is valuable to investigate these links longitudinally as well and to test

whether they remain stable across time. Moreover, finding that predictive effects between TSE and emotional labor are robust even after considering teachers' stable affective dispositions, suggest that TSE could be fostered by promoting more adaptive and desirable emotion regulation strategies and vice versa – using adaptive and desirable emotion regulation strategies could enhance TSE.

Method

Participants and Procedure

A convenience sample of 3,010 Croatian teachers participated in a longitudinal study with three time points with six months lags (Autumn, 2015; Spring, 2016; Autumn, 2016). Teachers came from 135 state schools and taught at elementary level (28.88%), middle school level (35.18%), and secondary school level (31.15%). The remaining number of teachers taught either at different levels or did not provide this information. Of the total sample, 82% teachers identified themselves as females, 16% as males, and 2% did not disclose information about their gender. At the beginning of the study (i.e., at Time 1), teachers were on average 41.75 years old (SD = 10.44) and had 15.28 (SD = 10.51) years of teaching experience.

The data was collected via postal service with the assistance of school psychologists who administered the questionnaires in their schools. Teachers' participation in the study was voluntary and anonymous – teachers were explained that they can quit at any point and that their responses will be treated with strict confidentiality and used exclusively for scientific purposes. Moreover, to match teachers' responses from different time points, specially created codes, generated by teachers themselves, were used. Lastly, to ensure confidentiality even more, teachers returned their completed questionnaires to school psychologists in closed envelopes. In total, approximately 6,000 teachers were invited to participate in the study, which makes an agreement rate to be around 50%. Out of the initial sample, 1,525 (51%)

teachers participated in the second wave of data collection while 1,081 (36%) teachers participated also in the third wave of data collection. Since this study was part of a larger research project on teacher's emotions and emotion regulation, in order to test our hypotheses, we used data on teachers' dispositional affectivity (i.e., PA and NA) collected only at first measurement occasion, as well as data on TSE and teachers' emotional labor collected at both the second and the third time point.

Next, we examined whether attrition across time points was related to teacher demographics (i.e., gender, career stage, and educational level) or to the substantive variables (i.e., dispositional affectivity, TSE, emotional labor). We found that male teachers were more likely than their female colleagues to leave the study after the first time point ($\chi^2(1) = 22.92$, $p < .001$) and after the second time point ($\chi^2(1) = 11.52$, $p = .001$). In addition, high-school teachers were more likely to leave the study after the first ($\chi^2(2) = 6.52$, $p = .038$) and second measurement occasions ($\chi^2(2) = 69.22$, $p < .001$) when compared to their colleagues employed at primary- and secondary-school levels. Regarding years of teaching experience, we did not find differences between teachers who dropped from the study after the first time point and teachers who continued to participate ($t(2923) = -.21$, $p = .833$). Likewise, there was no difference between teachers who left after the second wave of data collection when compared to those who finished the study ($t(2923) = .857$, $p = .392$). Moreover, teachers who left the study after the first wave did not differ from those who continued with participation with regard to PA ($t(2771) = -1.43$, $p = .152$) and NA ($t(2830) = 1.720$, $p = .085$). Lastly, teachers who quitted the study after the second time point did not differ from those who remained in the study to its end regarding TSE ($t(1495) = -1.691$, $p = .091$), deep acting, ($t(1467) = 1.411$, $p = .159$), hiding emotions ($t(1489) = -.312$, $p = .755$), and faking emotions ($t(1490) = .358$, $p = .720$) measured at the second wave of data collection. Due to nonsignificant differences in substantive variables between completers and non-completers,

we used the full information likelihood procedure (FIML; Enders, 2010) to handle the missing data which is considered as a suitable method to manage missing data in longitudinal designs (Jeličić et al., 2009).

Instruments

Dispositional affectivity was measured by the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988) which contains 10 items measuring negative affectivity (e.g., distressed, hostile, irritable) and 10 items measuring positive affectivity (e.g., excited, active, proud). Teachers rated the extent to which they typically feel in a described way in life in general using a 5-point scale ranging from 1(very slightly or not at all) to 5 (extremely).

TSE was measured by Teacher Self-efficacy Scale (TSES; Schwarzer et al., 1999) which consists of 10 items. Teachers rated their level of agreement for each item using a four-point scale ranging from 1 (not at all true) to 4 (exactly true). Sample item is: "I am convinced that I am able to successfully teach all relevant subject content to even the most difficult students."

Teachers' emotional labor was measured by the Emotional Labor Scale (Lee et al., 2010) which consisted of three subscales assessing each of the three emotional labor strategies. Each subscale consisted of three items and teachers rated how often, on an average working day in a classroom, they engage in described acts or behaviors by using a 5-point rating scale ranging from 1 (never) to 5 (always). Samples of acts and behaviors are "make an effort to actually feel the emotions that I need to display to others" (deep acting), "hide my true feelings about a situation" (hiding emotions), and "show emotions that I don't feel" (faking emotions).

Internal consistency coefficients (i.e., Cronbach αs) for all measures are presented in Table 1.

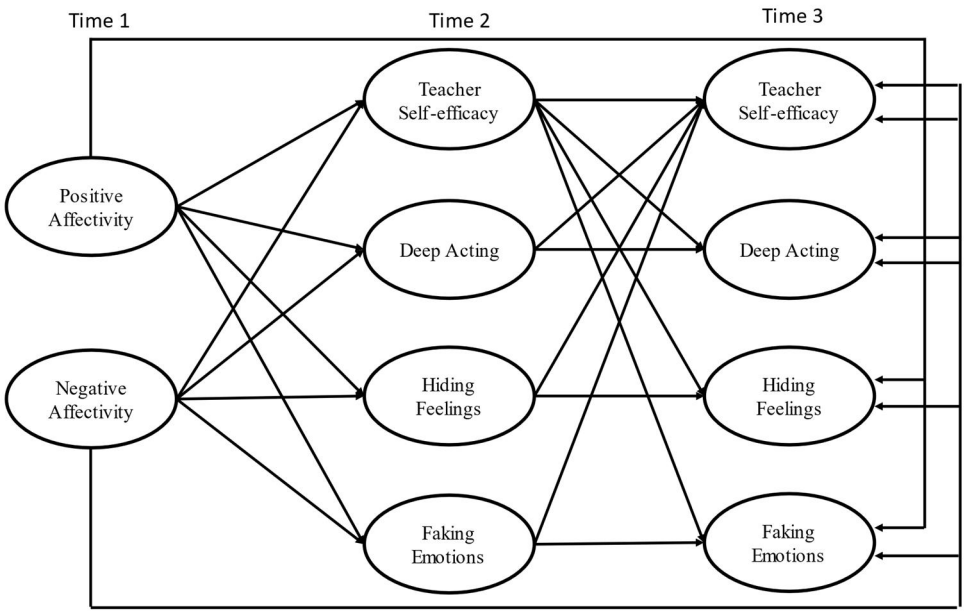
Data Analysis

Data were analyzed in several steps. First, since the data in the present study was hierarchically organized (i.e., teachers were nested in schools), we calculated intraclass correlation coefficients (ICC) to examine whether significant amount of variability in analyzed variables occurs at higher level of analysis (i.e., the school level). If the ICC values exceed .05, a multilevel approach should be implemented (Lüdtke et al., 2011). Second, descriptive statistics and Pearson correlation coefficients were calculated. Third, a confirmatory factor analysis (CFA) was conducted to test longitudinal measurement invariance of emotional labor strategies and TSE by evaluating whether configuration of latent variables and their indicators (i.e., configural invariance) as well as the size of the unstandardized factor loadings (i.e., metric invariance) hold equal across time points. In the measurement models, each latent variable (i.e., deep acting, hiding emotions, faking emotions, and TSE measured at Time 2 and Time 3) was represented by its respective items. Additionally, we introduced autocorrelations between the same indicators measured at Time 2 and Time 3.

After demonstrating that main constructs under investigation were measured in a sufficiently similar manner at different time points, in the fourth step, we conducted autoregressive cross-lagged analysis and tested the following structural models: (1) *stability model* (containing autoregressive paths from TSE and emotional labor strategies at Time 2 to the same constructs at Time 3), (2) *causal model* (containing the same paths as in the stability model in addition to cross-lagged paths from emotional labor strategies at Time 2 to TSE at Time 3), (3) *reverse-causal model* (containing the same paths as in the stability model in addition to cross-lagged paths from TSE at Time 2 to emotional labor strategies at Time 3), (4) *reciprocal model* (containing the same paths as in the stability model in addition to cross-lagged paths from TSE at Time 2 to emotional labor strategies at Time 3 and vice versa), and (5) *reciprocal model with dispositional affectivity as a covariate* (containing the same paths

as the reciprocal model in addition to predictive paths from PA and NA at Time 1 to emotional labor and TSE at Time 2 and Time 3). The reciprocal model with dispositional affectivity as a covariate is shown in Figure 1.

Figure 1 *The Hypothesized Reciprocal Model with Positive and Negative Affectivity as Covariates*



Note. For the sake of clarity, intercorrelations between constructs within a single time point were not depicted.

All analyses were conducted in Mplus 8.6 (Muthén & Muthén, 1998-2017) with maximum likelihood estimation with robust standard errors (MLR) estimator to evaluate model parameters. Missing data was handled using the full-information-maximum-likelihood (FIML) algorithm. To evaluate model fit, we used comparative fit index (CFI), the Tucker-Lewis index (TLI), the root mean error of approximation (RMSEA), and the standardized root mean square residual (SRMR). CFI and TLI values above .95 cutoff are indicative of excellent fit (Hu & Bentler, 1999), while RMSEA values below .06 and SRMR values below .08 are indicative of good fit (Browne & Cudeck, 1993). Fit of the nested models was

compared using ΔCFI < .010 and ΔRMSEA < .015 criteria, whereby lower values are indicative of a model with better fit (Chen, 2007; Cheung & Rensvold, 2002).

Results

Intraclass correlation coefficients for all manifest variables were low ranging from .002 up to .036 which is considered insufficient for justified implementation of multilevel modeling techniques. In addition, due to complex models involving latent variables, number of free parameters exceeded the number of clusters which can produce untrustworthy standard errors in multilevel analyses. Thus, we used single level analyses to test our research hypotheses.

Pearson correlation coefficients between study variables and teachers' demographic characteristics (i.e., gender and years of teaching experience) are shown in Table 1. We found no differences between male and female teachers in main study variables. However, teachers with more teaching experience also reported higher levels of TSE at Time 1 ($r = .07$, $p < .01$) and deep acting at Time 2 and Time 3 ($r = .12$, $p < .01$ and $r = .08$, $p < .01$, respectively), but lower levels of PA at Time 1 ($r = -.08$, $p < .01$) and faking emotions at Time 3 ($r = -.09$, $p < .01$). Regarding hypothesized relationships between study variables, we found positive correlations between PA and TSE and deep acting, and negative correlations between PA and hiding emotions and faking emotions, within and between measurement occasions. In contrast, NA was negatively related to TSE and positively to hiding and faking emotions, but unrelated to deep acting. Next, TSE was positively related to deep acting and negatively to hiding and faking emotions across and within time points.

Table 1

Descriptive Statistics and Pearson Correlations for Demographics, Dispositional Affectivity, TSE, and Emotional Labor Strategies

		1	2	3	4	5	6	7	8	9	10	11	12
1	Gender[1]	-	.05**	-.02	.07**	.00	-.01	.03	-.01	-.02	.03	.02	-.04
2	Experience[2]		-	-.08**	-.05*	.07**	.03	.12**	.06*	-.04	.08**	-.01	-.09**
3	PA (T1)			.85	-.30**	.34**	.38**	.12**	-.18**	-.18**	.14**	-.16**	-.13**
4	NA (T1)				.90	-.21**	-.23**	-.03	.23**	.25**	-.04	.23**	.23**
5	TSE (T2)					.86	.61**	.14**	-.24**	-.21**	.13**	-.22**	-.19**
6	TSE (T3)						.88	.15**	-.24**	-.18**	.23**	-.30**	-.22**
7	Deep acting (T2)							.86	.04	.05*	.53**	-.05	-.03
8	Hiding emotions (T2)								.79	.60**	.01	.49**	.40**
9	Faking emotions (T2)									.77	.04	.42**	.52**
10	Deep acting (T3)										.84	-.02	-.01
11	Hiding emotions (T3)											.80	.63**
12	Faking emotions (T3)												.79
	M	-	15.28	3.75	1.93	3.33	3.29	3.44	2.38	1.92	3.60	2.45	2.04
	SD	-	10.51	0.52	0.66	0.41	0.43	0.95	0.74	0.72	0.88	0.74	0.76

Note. [1]0 = male, 1 = female, [2]years of teaching experience; *p < .05, **p < .01; Cronbach α's are shown on a diagonal

Indicators of fit of tested model are presented in Table 2. A comparison of configural and metric invariance CFA models showed that factor loadings were equal across time points (ΔCFI = .000, ΔRMSEA = -.001). Regarding structural models, when compared to the stability model, causal model, reverse causal model, and reciprocal model did not fit the data better (ΔCFI = .001, ΔRMSEA = .000; ΔCFI = .001, ΔRMSEA = .000, and ΔCFI = .001, ΔRMSEA = .000, respectively). In addition, the reciprocal model did not fit the data better in comparison to causal (ΔCFI = .000, ΔRMSEA = .000) or reverse-causal model (ΔCFI = .000, ΔRMSEA = .000). However, the Akaike information criteria (AIC) and SRMR had the lowest values in reciprocal model suggesting its best fit to the data.

Table 2

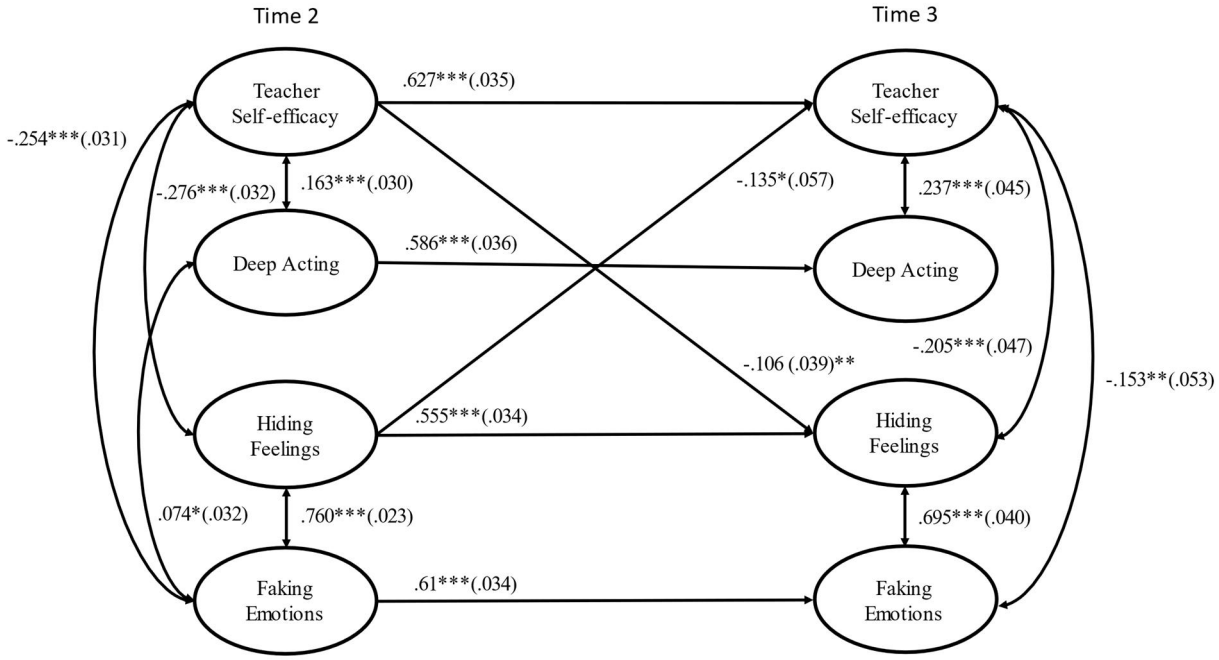
Fit Indexes of Tested Models

Model	AIC	χ^2 (df)	CFI	TLI	RMSEA (90% C.I.)	SRMR
Configural longitudinal invariance	90880.156	1441.620 (616)	.955	.948	.028 (.026, .030)	.035
Metric longitudinal invariance	90862.895	1453.735 (631)	.955	.950	.028 (.026, .030)	.036
Stability model	90886.239	1497.668 (643)	.954	.949	.028 (.026, .030)	.043
Causal model	90876.663	1482.924 (640)	.954	.949	.028 (.026, .030)	.039
Reverse causal model	90876.732	1483.951 (640)	.954	.949	.028 (.026, .030)	.039
Reciprocal model	90869.383	1471.275 (637)	.954	.949	.028 (.026, .030)	.037
Reciprocal model with PA and NA	214639.964	5200.341 (1548)	.912	.906	.028 (.027, .029)	.041

The results of the reciprocal model are shown in Figure 2. Inspection of the size and statistical significance of regression weights showed that some of the reciprocal regression weights were statistically significant. Namely, we found that TSE at Time 2 negatively predicted hiding emotions at Time 3 (β = -.135, p = .017), while hiding emotions at Time 2 negatively predicted TSE at Time 3 (β = -.106, p = .006). In addition, a structural path from TSE at Time 2 to deep acting at Time 3 was marginally statistically significant (β = .062, p = .065) as well as the path from deep acting at Time 2 to TSE at Time 3 (β = .068, p = .053). These results indicate that TSE and hiding emotions are reciprocally related to each other across time – higher levels of TSE predict higher levels of hiding emotions, and vice versa. Also, even though the reciprocal effects between TSE and deep acting were small and marginally statistically significant, results suggest that higher levels of TSE could be predictive of greater deep acting, and vice versa. Contrary to our hypothesis, TSE and faking emotions were unrelated across time.

Figure 2

The Results of the Reciprocal Model



Notes. *p < .05, **p < .01, ***p < .001; For the sake of clarity, only statistically significant paths were shown; Standard errors are shown in parentheses.

In the last step, we regressed TSE and all three emotional labor strategies assessed at both Time 2 and Time 3 on PA and NA assessed at Time 1 in the reciprocal model. Even though the model fit remained within an acceptable range, the size and statistical significance of cross-lagged paths changed. As can be seen in Table 3, regression weights associated with structural paths from TSE to hiding emotions and vice versa were slightly reduced in their sizes but remained statistically significant (i.e., β = -.079, p = .050, and β = -.123, p = .023, respectively). However, paths from TSE at Time 2 to deep acting at Time 3 and vice versa lost their significance substantially (β = .039, p = .309, and β = .050, p = .127, respectively). As in the initial reciprocal model, paths from TSE at Time 2 to faking emotions at Time 3 and vice versa were statistically nonsignificant (β = -.043, p = .283, and β = .059, p = .286, respectively)

However, teachers' dispositional affectivity turned out as an important predictor of TSE and emotional labor at both measurement occasions. More specifically, PA at Time 1 positively predicted TSE at Time 2 and Time 3 (β = .351, p < .001 and β = .190, p < .001, respectively) and deep acting at Time 2 (β = .152, p < .001), but negatively hiding emotions and faking emotions at Time 2 (β = -.150, p < .001 and β = -.134, p < .001, respectively). In contrast, NA at Time 1 negatively predicted TSE at Time 2 (β = -.123, p < .001), but positively predicted hiding emotions and faking emotions at Time 2 (β = .199, p < .001 and β = .236, p < .001, respectively) and hiding emotions and faking emotions at Time 3 (β = .107, p = .003 and β = .099, p = .005, respectively). Other longitudinal associations of PA and NA with TSE and emotional labor strategies were nonsignificant.

In general, these findings lead to following conclusions: (1) predictive effects from TSE to emotional labor and vice versa were reduced (or became nonsignificant) after including dispositional affectivity in the model, (2) teachers' dispositional affectivity more efficiently explains variance of criterion variables that are assessed closer in time (i.e., at Time 2), (3) as expected, PA positively predicted TSE and deep acting, but negatively predicted surface acting (i.e., hiding emotions and faking emotions), while NA negatively predicted TSE but positively predicted surface acting, (4) across time, PA was consistently important in predicting TSE while NA was consistently important in predicting surface acting.

Table 3

Results of the Reciprocal Model with Dispositional Affectivity

Autoregressive Paths	*β*	*S.E.*	*p*
TSE (T2) → TSE (T3)	.522	.039	< *.001*
Deep Acting (T2) → Deep Acting (T3)	.582	.036	< *.001*
Hiding Emotions (T2) → Hiding Emotions (T3)	.530	.035	< *.001*

Faking Emotions (T2) → Faking Emotions (T3)	.589	.036	*< .001*
Cross-Lagged Paths			
TSE (T2) → Deep Acting (T3)	.039	.039	.309
TSE (T2) → Hiding Emotions (T3)	-.079	.040	*.050*
TSE (T2) → Faking Emotions (T3)	-.043	.040	.283
Deep Acting (T2) → TSE (T3)	.050	.033	.127
Hiding Emotions (T2) → TSE (T3)	-.123	.054	*.023*
Faking Emotions (T2) → TSE (T3)	.059	.055	.286
Dispositional Affectivity Control Paths			
PA (T1) → TSE (T2)	.351	.032	*< .001*
PA (T1) → Deep Acting (T2)	.152	.034	*<. 001*
PA (T1) → Hiding Emotions (T2)	-.150	.033	*< .001*
PA (T1) → Faking Emotions (T2)	-.134	.035	*< .001*
NA (T1) → TSE (T2)	-.123	.032	*< .001*
NA (T1) → Deep Acting (T2)	.033	.032	.306
NA (T1) → Hiding Emotions (T2)	.199	.032	*< .001*
NA (T1) → Faking Emotions (T2)	.236	.033	*< .001*
PA (T1) → TSE (T3)	.190	.035	*< .001*
PA (T1) → Deep Acting (T3)	.071	.038	.060
PA (T1) → Hiding Emotions (T3)	-.013	.0431	.747
PA (T1) → Faking Emotions (T3)	.014	.040	.727
NA (T1) → TSE (T3)	-.053	.032	.101
NA (T1) → Deep Acting (T3)	-.008	.034	.815
NA (T1) → Hiding Emotions (T3)	.107	.035	*.003*
NA (T1) → Faking Emotions (T3)	.099	.036	*.005*

Discussion

Teachers engage in emotional labor on a daily basis to regulate their emotions and emotional expressions (Carson, 2006; Lavy & Eshet, 2018). Such emotion regulatory attempts might shape their TSE levels or be shaped by their TSE levels. Both constructs, that is, emotional labor and TSE, are important determinants of teachers' well-being and effectiveness (Klassen & Tze, 2014; Wang et al., 2019; Yin et al., 2018; Zee & Koomen, 2016). Given the critical roles of TSE and emotional labor in teachers' professional lives, testing the reciprocity of their relationship and determining which construct precedes the other in their causal order, pose as important research questions. To the best of our knowledge, studies based on longitudinal designs that tested the reciprocal linkages between these constructs are still missing. Therefore, our study provides valuable insights into the nature of the relationship between teachers' emotional labor and TSE that unfolds over time. Moreover, research on teachers' personality characteristics that can explain differences in their emotional and motivational processes have been largely neglected. Thus, our aim was to test the role of teachers' dispositional affectivity in predicting emotional labor and TSE, but also to explore whether the established reciprocal relationships hold even after controlling for teachers' stable affective aspects of personality.

Reciprocal Relationship Between Emotional Labor and TSE

According to our first hypothesis, it was expected that teachers' emotional labor and TSE will be reciprocally related to each other over time. Our results showed that reciprocity was clearly present only when it comes to the relationship between TSE and hiding emotions – teachers with higher TSE were less likely to use hiding emotions in the future and teachers who used hiding emotions more frequently were more likely to have lower TSE in the future. According to the premises of social-cognitive theory (Bandura, 1997), self-efficacy determines how environmental opportunities and impediments are perceived (Bandura,

2006), but also affect choice of activities, how much effort is expended on an activity, and how long individuals will persevere when confronted with obstacles (Pajares, 1997). Teachers possessing lower TSE have reduced capacity to deal with stressful classroom situations (Schwarzer & Hallum, 2008; Skaalvik & Skaalvik, 2017) and are more likely to experience negative emotions when faced with challenges and obstacles. Since negative emotions are oftentimes undesirable to be spontaneously displayed in the classroom (Sutton et al., 2009; Taxer & Frenzel, 2015), teachers need to suppress their observable features. In turn, since engaging in surface acting (i.e., suppression) does not actually alter negative emotions that are being felt, but only affect their expressions (John & Gross, 2004), teachers continue to experience negative affective states which are, according to the social-cognitive theory (Bandura, 1997), being interpreted as lack of capabilities to successfully deal with job demands, which further deteriorates their TSE.

Contrary to our expectations, longitudinal relationship between faking emotions and TSE was not statistically significant. Even though faking emotions and hiding emotions are two facets of the same construct, that is, surface acting, our results once again emphasized the importance of treating them as independent constructs in empirical research. While teachers mostly try to suppress or hide negative emotions because they view them as an inappropriate (Sutton et al., 2009; Taxer & Frenzel, 2015), reasons behind faking are less obvious and can be responsible for different functioning of hiding and faking emotions. More specifically, complying with the emotional display rules of the teaching profession is not the only reason why teachers engage in emotional labor. Instead, teachers might purposefully use different emotional labor strategies to raise their effectiveness, that is, to stay focused on teaching, engage students in learning, and nurture positive relationships with students (Hagenauer & Volet, 2014; Sutton, 2004). Therefore, teachers may engage in faking emotions independently from suppression to raise their own effectiveness which can even have positive

long-term effects on their efficacy beliefs. For example, teachers may fake enthusiasm or thrill when students succeed to stimulate them to keep doing the good job. However, in such circumstances, teachers do not actually feel negative emotions that can dampen their TSE. In addition, since teachers with greater TSE also perform better in the classroom (Klassen & Tze, 2014; Zee & Koomen, 2016), they could be more inclined to positive emotional experiences that can be freely expressed in their genuine form (i.e., successful teachers are indeed enthusiastic and can openly display their enjoyment) and, thus, will not need to frequently engage in faking emotions. In sum, teachers conjure up faked emotions to substitute undesirable (negative) emotions with positive ones, but also to achieve certain teaching goals. Different reasons for faking emotions might be distinctly related to TSE resulting in weaker negative association between TSE and faking emotions (when compared to hiding emotions).

We also found small and marginally significant reciprocal effects between TSE and deep acting indicating that teachers with greater TSE are more likely to use deep acting in the future and vice versa. This result is in accordance with theoretical expectations – teachers possessing higher levels of TSE have greater capacity to deal with stressful classroom situations, are more likely to experience positive affective experiences, but are also readier to invest effort to continue to feel positive emotions by engaging in deep acting. In turn, engaging in deep acting produces positive and desirable emotions that may foster TSE (Bandura, 1997; Hoy et al., 2009). However, these longitudinal associations were weak and lost their statistical significance after controlling for dispositional affectivity.

Effects of Dispositional Affectivity on Emotional Labor and TSE

Our second hypothesis stated that teachers' dispositional affectivity will predict emotional labor and TSE. Indeed, we found that PA positively predicted future TSE at both time points (i.e., after six months and after a year). However, even though predictive effects

of PA on emotional labor strategies were in line with our expectations, they were less long term – PA positively predicted deep acting and negatively surface acting but only after six months. In contrast, NA positively (and consistently across time) predicted both strategies of surface acting. However, NA was able to negatively predict TSE only after six months, but not also after a year.

In general, our results confirm previous research on the importance of affective predispositions in explaining how individuals regulate their job-related emotions (Bono & Vey, 2005; Kammeyer-Mueller et al., 2013). Individuals high in PA generally have broader behavioral repertoires and are more flexible in responding to given situational demands (Fredrickson, 2001). In addition, they may believe that engaging in deep acting, which is an effortful attempt to reduce emotional dissonance, can actually yield personal benefits for them such as increasing job performance (Kammeyer-Mueller et al., 2013). Therefore, teachers with higher PA are more likely to engage in deep acting. Moreover, considering that teachers high in PA also more frequently experience positive affective states that are welcomed in the classroom, they are less inclined to hide and fake emotions. On the contrary, individuals high in NA generally have greater difficulties in emotion regulation (e.g., Austin et al., 2008; Ng & Diener, 2009) and are less likely to engage in more "deep" and deliberate emotion regulation strategies such as reappraisal (Kammeyer-Mueller et al., 2009). Instead, they most often choose easier, but more superficial strategies such as suppression and / or faking. In addition, teachers high in NA also more frequently experience negative affective states while in the classroom that need to be hidden and substituted by more desirable (but faked) ones.

We also found that PA and NA as stable personal dispositions predict TSE. According to the social-cognitive theory (Bandura, 1997) and in line with previous research on the effects of mood on self-efficacy (e.g., Kavanagh & Bower, 1985; Medrano et al., 2016),

positive affective states that stem from PA and negative affective states that stem from NA, foster and reduce TSE, respectively. In other words, teachers who are predisposed to react with positive emotions in different classroom situations will have greater TSE because experienced positive emotions convey a message that they are performing well and that everything unfolds as expected which further boosts their confidence and sense of efficacy. Unfortunately, teachers who frequently experience negative emotions in the classroom due to their stable predispositions, might view such feelings as indicators of their suboptimal performance which might impede their TSE.

Interestingly, we revealed that positive predictive effects of PA on TSE and positive predictive effects of NA on surface acting were stable even after one year period. TSE is generally considered as a malleable construct that can be changed by influencing on its sources (e.g., mastery experience, vicarious experience, verbal persuasion, and physiological and affective states; Bandura, 1997; Morris et al., 2017). Regarding teachers' emotional experiences, it can be assumed that fostering positive affective experiences by intentionally engaging in more adaptive emotion regulation strategies, can enhance TSE. However, our results suggest that stable positive affective dispositions that are only modestly malleable are important for shaping TSE as well and that this effect might be a long term one. In addition, we found that NA has enduring but unfavorable effects on teachers' emotion regulation by making teachers more inclined to surface acting which is related to poorer professional well-being (Yin et al., 2018; Wang et al., 2019). These results indicate that efforts should be directed into training teachers to become aware of their emotions and different ways of regulating them in order to promote those strategies (e.g., reappraisal, active modification of a situation; see Burić et al., 2016) that can buffer potential adverse effects of their stable personality characteristics.

Lastly, according to our third hypothesis, we expected that the reciprocal relationship between TSE and emotional labor will hold even after controlling for teachers' dispositional affectivity. We found that only the reciprocal relationship between TSE and hiding emotions remains stable after controlling for stable teachers' affective dispositions. Longitudinal associations between TSE and deep acting were much weaker and only marginally statistically significant, and after adding PA and NA in the model, they became negligible. These results suggest that among an array of emotion regulation strategies that teachers use on a daily basis, hiding emotions might be the most harmful one for their motivation too. Indeed, previous research showed that hiding emotions is negatively related to their teaching performance and students' outcomes (Burić, 2019; Burić & Frenzel, 2021).

Limitations and Direction for Future Research

The present research has several limitations that need to be considered in order to more accurately understand the obtained results. First, even though we collected data from a respectable number of teachers, the sample was convenient and might not fully reflect the true associations that exist at population level. Relatedly, regardless the fact that our investigation was directed to personal rather than contextual variables, effects of wider national and / or cultural context on teachers' responses should be acknowledged. Thus, it is necessary to replicate obtained findings on samples from other regions, countries, and cultures. In addition, even though we guaranteed strict confidentiality to teachers, we cannot completely exclude the possibility that they gave socially desirable responses or used self-enhancement strategies while providing responses to questionnaire items. Such respondents' behavior may lead to range restrictions and reduce the effect sizes. Next, the time lag in our study was six months. With this time lag we found a firm reciprocal relationship only between TSE and hiding emotions, while it is possible that the reciprocal relationship between TSE and deep acting (or faking emotions) exists within a shorter time span. Thus,

future studies should use either shorter or longer time lags to reveal for how long current levels of one construct determine future levels of the other construct. Moreover, since novel conceptualizations of emotion regulation and emotional labor emphasize their dynamic, fluctuating nature across time, situations, and contexts (Beal & Trougakos, 2013; Grandey & Gabriel, 2015; Gross, 2015), future studies should implement intensive longitudinal methods that would more accurately provide insights into dynamic temporal associations between TSE and emotional labor. Lastly, future longitudinal studies should consider including teachers' emotions as possible mediators in explaining the predictive effects of emotional labor on TSE in order to confirm previous research findings established with cross-sectional design (Lee & van Vlack, 2018).

Conclusions

Our research showed that TSE and hiding emotions are reciprocally related to each other even after controlling for dispositional affectivity. Teachers with lower levels of TSE are more likely to rely on hiding emotions in the future, while teachers who more often use hiding to regulate their emotions are more likely to have lower TSE. Bearing in mind that for optimal performance and wellbeing it is important that teachers preserve their TSE (Klassen & Tze, 2014; Zee & Koomen, 2016) and avoid using hiding emotions (Wang et al., 2019; Yin et al., 2018), efforts directed toward boosting TSE (e.g., by ensuring opportunities for mastery experience) or training teachers to use more adaptive emotion regulation strategies (e.g., reappraisal) might turn fruitful in raising their overall functioning despite possible adverse effects of their stable personality characteristics.

Contrary to our expectations and the results of previous and mostly cross-sectional studies, we did not find (stable) longitudinal relationships between TSE and other two types of emotional labor, that is, deep acting and faking emotions. Our findings underscore the value of implementing stronger full-panel longitudinal designs while trying to reveal

predictive effects of TSE and emotional labor. If TSE and emotional labor are assessed only concurrently (i.e., cross-sectionally), true predictive effects between these two constructs cannot be established nor can they be easily distinguished from effects related to method. More specifically, assessing both constructs within a single time point and with a same method, which was done in vast majority of previous research, can lead to common-method bias, that is, to inflated estimates of their relationship (Podsakoff et al., 2012). Separating the assessment of constructs across time, which is inherent to longitudinal designs, can reduce such undesirable effects and help to reveal more accurate estimates. Finally, the results of our study suggest that expectations regarding the relationship between all three types of emotional labor strategies and TSE that were based on theoretical considerations and previous cross-sectional research, might not hold true in studies based on longitudinal designs and after taking into account teachers' stable personality dispositions.

References

Abraham, R. (1999). Negative affectivity: Moderator or confound in emotional dissonance-outcome relationships? *The Journal of Psychology, 133*, 61-72. https://doi.org/10.1080/00223989909599722

Ashforth, B. E., & Humphrey, R. H. (1993). Emotional labor in service roles: The influence of identity. *Academy of Management Review*, *18*(1), 88-115. https://doi.org/10.5465/amr.1993.3997508

Austin, E. J., Dore, T. C., & O'Donovan, K. M. (2008). Associations of personality and emotional intelligence with display rule perceptions and emotional labour. *Personality and Individual Differences, 44*, 679-688. https://doi.org/10.1016/j.paid.2007.10.001

Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman.

Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management, 38*, 44 - 9. https://doi.org/10.1177/0149206311410606

Beal, D. J., & Trougakos, J. P. (2013). Episodic intrapersonal emotion regulation: Or, dealing with life as it happens. In A. A. Grandey, J. M. Diefendorff, & D. E. Rupp (Eds.), *Emotional labor in the 21st century: Diverse perspectives on emotion regulation at work* (pp. 31–55). Routledge/Taylor & Francis Group.

Bono, J. E., & Vey, M. A. (2005). Toward understanding emotional management at work: A quantitative review of emotional labor research. In C. E. Härtel, W. J. Zerbe, & N. M. Ashkanasy (Eds.), *Emotions in organizational behavior* (pp. 213–233). Lawrence Erlbaum Associates Publishers.

Brotheridge, C. M., & Grandey, A. A. (2002). Emotional labor and burnout: Comparing two perspectives of "people work". *Journal of Vocational Behavior*, *60*(1), 17-39. https://doi.org/10.1006/jvbe.2001.1815

Browne, M. W., & Cudeck, R. (1992). Alternative ways of assessing model fit. *Sociological Methods & Research*, *21*, 230-258. https://doi.org/10.1177/0049124192021002005

Burić, I. (2019). The role of emotional labor in explaining teachers' enthusiasm and students' outcomes: A multilevel mediational analysis. *Learning and Individual Differences, 70*, 12–20. https://doi. org/10. 1016/j. lindif.2019.01.002

Burić, I., & Frenzel, A. C. (2021). Teacher emotional labour, instructional strategies and students' academic engagement: A multilevel analysis. Teachers and Teaching: Theory and Practice, 27(5), 335–352. https://doi.org/10.1080/13540602.2020.1740194

Burić, I., Penezić, Z., & Sorić, I. (2016). Regulating emotions in the teacher's workplace: Development and initial validation of the Teacher Emotion-Regulation Scale.

International Journal of Stress Management, 24(3), 217–246. https://doi.org/10.1037/str0000035.

Burić, I., Slišković, A., & Penezić, Z. (2019). A two-wave panel study on teachers' emotions and emotional-labour strategies. *Stress and Health, 35*(1), 27–38. https://doi.org/10.1002/smi.2836

Carson, R. L. (2006). *Exploring the episodic nature of teachers' emotions as it relates to teacher burnout*. West Lafayette: Purdue University.

Chemers, M. M., Hu, L.-t., & Garcia, B. F. (2001). Academic self-efficacy and first year college student performance and adjustment. *Journal of Educational Psychology, 93*(1), 55–64. https://doi.org/10.1037/0022-0663.93.1.55

Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal, 14*(3), 464-504. https://doi.org/10.1080/10705510701301834

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling*, *9*(2), 233-255. https://doi.org/10.1207/S15328007SEM0902_5

Cropanzano, R., James, K., & Konovsky, M. A. (1993). Dispositional affectivity as a predictor of work attitudes and job performance. *Journal of Organizational Behavior, 14*(6), 595-606. https://doi.org/10.1002/job.4030140609

Dahling, J.J.& Johnson, H.M. (2013), Motivation, fit, confidence, and skills: How do individual differences influence emotional labor? In A.A. Grandey, J.M. Diefendorff, & D.E. Rupp (Eds.), *Emotional labor in the 21st century: Diverse perspectives on emotion regulation at work* (57-78). New York: Routledge.

Diener, E., Lucas, R., & Oishi, S. (2002). Subjective well-being: The science of happiness and life satisfaction. In C. R. Snyder & S. J. Lopez (Eds.), *The handbook of positive psychology* (pp. 63-73). New York: Oxford University Press.

Ekman, P., Sorenson, E. R., & Friesen, W. V. (1969). Pan-cultural elements in facial displays of emotion. *Science, 164*(3875), 86-88. https://doi.org/10.1126/science.164.3875.86

Enders, C. K. (2010). *Applied missing data analysis*. Guilford Press.

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56*(3), 218–226. https://doi.org/10.1037/0003-066X.56.3.218

Gerhardt, M. W., & Brown, K. G. (2006). Individual differences in self-efficacy development: The effects of goal orientation and affectivity. *Learning and Individual Differences, 16*(1), 43-59. https://doi.org/10.1016/j.lindif.2005.06.006

Gist, M. E., & Mitchell, T. R. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management Review, 17*(2), 183-211.

Gist, M., & Mitchel, T. R. (1992). Self-efficacy: A Theoretical Analysis of Its Determinants and Malleability. *Acadamy Management Review*, *17*(2), 183–211. https://doi.org/10.5465/amr.1992.4279530

Grandey, A. A. (2000). Emotional regulation in the workplace: A new way to conceptualize emotional labor. *Journal of Occupational Health Psychology*, *5*, 95-110.

Grandey, A. A., & Gabriel, A. S. (2015). Emotional labor at a crossroads: Where do we go from here? *Annual Review of Organizational Psychology and Organizational Behavior*, *2*, 323-349. https://doi.org/10.1146/annurev-orgpsych-032414-111400

Grandey, A. A., & Melloy, R. C. (2017). The state of the heart: Emotional labor as emotion regulation reviewed and revised. *Journal of Occupational Health Psychology, 22*(3), 407–422. https://doi.org/10.1037/ocp0000067

Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry*, *26*, 1-26. https://doi.org/10.1080/1047840X.2014.940781

Hagenauer, G., & Volet, S. E. (2014). "I don't hide my feelings, even though I try to": Insight into teacher educator emotion display. *The Australian Educational Researcher*, *41*, 261-281. https://doi.org/10.1007/s13384-013-0129-5

Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*. University of California Press. https://doi.org/10.1016/j.lindif.2019.01.002

Hoy, A. W., Hoy, W. K., & Davis, H. A. (2009). Teachers' self-efficacy beliefs. In K. R. Wenzel & A. Wigfield (Eds.), *Handbook of motivation at school* (pp. 627–653). Routledge/Taylor & Francis Group.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*, 1-55. https://doi.org/10.1080/10705519909540118

Humphrey, R. H., Ashforth, B. E., & Diefendorff, J. M. (2015). The bright side of emotional labor. *Journal of Organizational Behavior, 36*(6), 749-769. https://doi.org/10.1002/job.2019

Jeličić, H., Phelps, E., & Lerner, R. M. (2009). Use of missing data methods in longitudinal studies: The persistence of bad practices in developmental psychology. *Developmental Psychology, 45*(4), 1195–1199. https://doi.org/10.1037/a0015665

John, O. P., & Gross, J. J. (2004). Healthy and unhealthy emotion regulation: Personality processes, individual differences, and life span development. *Journal of Personality, 72*(6), 1301-1334. https://doi.org/10.1111/j.1467-6494.2004.00298.x

Kammeyer-Mueller, J. D., Rubenstein, A. L., Long, D. M., Odio, M. A., Buckman, B. R., Zhang, Y., & Halvorsen-Ganepola, M. D. (2013). A meta-analytic structural model of

dispositional affectivity and emotional labor. *Personnel Psychology*, *66*, 47-90. https://doi.org/10.1111/peps.12009

Kanfer, R., & Heggestad, E. D. (1997). Motivational traits and skills: A person-centered approach to work motivation. *Research in Organizational Behavior, 19*, 1-56.

Karim, J., & Weisz, R. (2011). Emotional intelligence as a moderator of affectivity/emotional labor and emotional labor/psychological distress relationships. *Psychological Studies*, *56*, 348-359. https://doi.org/10.1007/s12646-011-0107-9

Kavanagh, D. J., & Bower, G. H. (1985). Mood and self-efficacy: Impact of joy and sadness on perceived capabilities. *Cognitive Therapy and Research, 9*(5), 507–525. https://doi.org/10.1007/BF01173005

Klassen, R. M., & Tze, V. M. (2014). Teachers' self-efficacy, personality, and teaching effectiveness: A meta-analysis. *Educational Research Review*, *12*, 59-76. https://doi.org/10.1016/j.edurev.2014.06.001

Lavy, S., & Eshet, R. (2018). Spiral effects of teachers' emotions and emotion regulation strategies: evidence from a daily diary study. *Teaching and Teacher Education*, *73*, 151-161. https://doi.org/10.1016/j.tate.2018.04.001

Lee, M., & Van Vlack, S. (2018). Teachers' emotional labour, discrete emotions, and classroom management self-efficacy. *Educational Psychology, 38*(5), 669-686. https://doi.org/10.1080/01443410.2017.1399199

Lee, M., Pekrun, R., Taxer, J. L., Schutz, P. A., Vogl, E., & Xie, X. (2016). Teachers' emotions and emotion management: Integrating emotion regulation theory with emotional labor research. *Social Psychology of Education, 19*(4), 843-863. https://doi.org/10.1007/s11218-016-9359-5

Lee, R. T., & Brotheridge, C. M. (2011). Words from the heart speak to the heart: A study of deep acting, faking, and hiding among child care workers. *Career Development International, 16*(4), 401-420. https://doi.org/10.1108/13620431111158805

Lee, Y. H. (2019). Emotional labor, teacher burnout, and turnover intention in high-school physical education teaching. *European Physical Education Review, 25*(1), 236-253. https://doi.org/10.1177/1356336X17719559

Lüdtke, O., Marsh, H. W., Robitzsch, A., & Trautwein, U. (2011). A 2 × 2 taxonomy of multilevel latent contextual models: Accuracy–bias trade-offs in full and partial error correction models. *Psychological Methods, 16*(4), 444–467. https://doi.org/10.1037/a0024376

Manning, K., Paulus, D. J., Hogan, J. B., Buckner, J. D., Farris, S. G., & Zvolensky, M. J. (2018). Negative affectivity as a mechanism underlying perceived distress tolerance and cannabis use problems, barriers to cessation, and self-efficacy for quitting among urban cannabis users. *Addictive Behaviors, 78*, 216-222. https://doi.org/10.1016/j.addbeh.2017.11.041

Medrano, L. A., Flores-Kanter, E., Moretti, L., & Pereno, G. L. (2016). Effects of induction of positive and negative emotional states on academic self-efficacy beliefs in college students. *Psicología Educativa, 22*(2), 135-141. https://doi.org/10.1016/j.pse.2015.03.003

Morris, D. B., Usher, E. L., & Chen, J. A. (2017). Reconceptualizing the sources of teaching self-efficacy: A critical review of emerging literature. *Educational Psychology Review*, *29*(4), 795-833. https://doi.org/10.1007/s10648-016-9378-y

Moskowitz, D. S., & Coté, S. (1995). Do interpersonal traits predict affect? A comparison of three models. *Journal of Personality and Social Psychology, 69*(5), 915–924. https://doi.org/10.1037/0022-3514.69.5.915

Muthén, L. K., & Muthén, B. O. (1998-2017). *Mplus user's guide*. Muthén & Muthén.

Ng, W., & Diener, E. (2009). Feeling bad? The "power" of positive thinking may not apply to everyone. *Journal of Research in Personality, 43*(3), 455-463. https://doi.org/10.1016/j.jrp.2009.01.020

Pajares, F. (1997). Current directions in self-efficacy research. *Advances in Motivation and Achievement*, 10(149), 1-49.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879-903.

Sahin, E. (2015). Determination of associations between educational beliefs, emotional labor and self-efficacy in teacher candidates. *The Anthropologist, 19*(2), 543-555. https://doi.org/10.1080/09720073.2015.11891689

Schaubroeck, J., & Jones, J. R. (2000). Antecedents of workplace emotional labor dimensions and moderators of their effects on physical symptoms. *Journal of Organizational Behavior*, *21*(2), 163-183. https://doi.org/10.1002/(SICI)1099-1379(200003)21:2<163::AID-JOB37>3.0.CO;2-L

Schwarzer, R., & Hallum, S. (2008). Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediation analyses. *Applied Psychology*, *57*, 152-171. https://doi.org/10.1111/j.1464-0597.2008.00359.x

Schwarzer, R., Schmitz, G. S., & Daytner, G. T. (1999). The teacher self-efficacy scale. *available at: www. fu-berlin. de/gesund/skalen/t_se. htm*.

Skaalvik, E. M., & Skaalvik, S. (2017). Teacher stress and teacher self-efficacy: Relations and consequences. In T.M. McIntyre, S. E. McIntyre & D. J. Francis (Eds.), *Educator stress* (pp. 101-125). Springer.

Soodak, L. C., & Podell, D. M. (1996). Teacher efficacy: Toward the understanding of a multi-faceted construct. *Teaching and Teacher Education*, *12*(4), 401-411. https://doi.org/10.1016/0742-051X(95)00047-N

Sutton, R. E. (2004). Emotional regulation goals and strategies of teachers. *Social Psychology of Education*, *7*, 379-398. https://doi.org/10.1007/s11218-004-4229-y

Sutton, R. E., Mudrey-Camino, R., & Knight, C. C. (2009). Teachers' emotion regulation and classroom management. *Theory Into Practice*, *48*(2), 130-137. https://doi.org/10.1080/00405840902776418

Taxer, J. L., & Frenzel, A. C. (2015). Facets of teachers' emotional lives: A quantitative investigation of teachers' genuine, faked, and hidden emotions. *Teaching and Teacher Education*, *49*, 78-88. https://doi.org/10.1016/j.tate.2015.03.003

Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, *17*, 783-805. https://doi.org/10.1016/S0742-051X(01)00036-1

Wang, H., Hall, N. C., & Taxer, J. L. (2019). Antecedents and consequences of teachers' emotional labor: A systematic review and meta-analytic investigation. *Educational Psychology Review, 31*, 663-698. https://doi.org/10.1007/s10648-019-09475-3

Watson, D., & Clark, L. A. (1984). Negative affectivity: The disposition to experience aversive emotional states. *Psychological Bulletin, 96*(3), 465–490. https://doi.org/10.1037/0033-2909.96.3.465

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063-1070.

Watson, D., Wiese, D., Vaidya, J., & Tellegen, A. (1999). The two general activation systems of affect: Structural findings, evolutionary considerations, and psychobiological evidence. *Journal of Personality and Social Psychology, 76*(5), 820-830.

Wheatley, K. F. (2005). The case for reconceptualizing teacher efficacy research. *Teaching and Teacher Education, 21*(7), 747-766. https://doi.org/10.1016/j.tate.2005.05.009

Yin, H. (2016). Knife-like mouth and tofu-like heart: Emotion regulation by Chinese teachers in classroom teaching. *Social Psychology of Education, 19*(1), 1-22. https://doi.org/10.1007/s11218-015-9319-5

Yin, H. B., & Lee, J. C. K. (2012). Be passionate, but be rational as well: Emotional rules for Chinese teachers' work. *Teaching and Teacher Education, 28*(1), 56-65. https://doi.org/10.1016/j.tate.2011.08.005

Yin, H., Huang, S., & Chen, G. (2019). The relationships between teachers' emotional labor and their burnout and satisfaction: A meta-analytic review. *Educational Research Review, 28*, 100283. https://doi.org/10.1016/j.edurev.2019.100283

Yin, H., Huang, S., & Lee, J. C. K. (2017). Choose your strategy wisely: Examining the relationships between emotional labor in teaching and teacher efficacy in Hong Kong primary schools. *Teaching and Teacher Education, 66*, 127-136. https://doi.org/10.1016/j.tate.2017.04.006

Zee, M., & Koomen, H. M. (2016). Teacher self-efficacy and its effects on classroom processes, student academic adjustment, and teacher well-being: A synthesis of 40 years of research. *Review of Educational Research*, *86*, 981-1015. https://doi.org/10.3102/0034654315626801