# An emotion focused approach in predicting teacher burnout and job satisfaction

Çağla Atmaca [a, *], Filiz Rızaoğlu [a], Turgut Türkdoğan [b], Demet Yaylı [a]

[a] Pamukkale University, Faculty of Education, English Language Teaching Programme, 20070, Kınıklı, Denizli, Turkey
[b] Pamukkale University, Faculty of Education, Psychological Counselling and Guidance Programme, 20070, Kınıklı, Denizli, Turkey

## HIGHLIGHTS

- The Turkish adapted version of TEI (Chen, 2016) proved to be a reliable and valid instrument.
- Correlations were found between in-service teachers' emotions, burnout and job satisfaction.
- Joy and love dimensions exhibited positive correlations with job satisfaction.
- Love and fear dimensions significantly predicted job satisfaction with a medium effect.
- Love, sadness, and fear dimensions significantly predicted educators' burnout with a medium effect.

## ARTICLE INFO

## ABSTRACT

This study aimed to find out the correlations between in-service teachers' emotional, burnout and job satisfaction in Turkey. To this end, the Teacher Emotion Inventory (TEI), Job Satisfaction Questionnaire and Maslach Burnout Inventory were administered to 564 in-service teachers in a wide range of disciplines. According to confirmatory factor analysis, the five-factor model of TEI was successfully confirmed within the current study. In addition, joy and love dimensions exhibited positive correlations with job satisfaction. The love and fear dimensions significantly predicted job satisfaction with a medium effect. Love, sadness, and fear dimensions significantly predicted teachers' burnout with a medium effect.

© 2020 Elsevier Ltd. All rights reserved.

## 1. Introduction

Teacher emotion is an interrelated and intermediating term among several variables such as job satisfaction, burnout, identity, cognition and competencies in that the more the teacher becomes aware of his/her emotional experience, the more rapport s/he can build with colleagues and the more s/he can cope with the dehumanization of teaching career in some contexts (Shapiro, 2010). Despite these interrelationships, emotions in educational research have been disregarded for a long time. The reasons for the dearth of research in this area might be the difficulty in defining and assessing the subjective emotional aspects of learning compared to the more objective and relatively more observable cognitive aspects such as thinking, motivation, metacognition and professional aspects like identity formation (Karlsson, 2013; Shapiro, 2010; Timoštšuk & Ugaste, 2012), professional development (Golombek & Doran, 2014), burnout (Fiorilli, Albanese, Gabola, & Pepe, 2017), and self-efficacy (Penrose, Perry, & Ball, 2007). In a nutshell, Frenzel and Stephens (2013, p. 5) acknowledge the complexity of emotions and define them as "multidimensional constructs comprising affective, psychological, cognitive, expressive, and motivational components".

Teachers are involved in different social interactions in classroom settings and it is important for them to establish a good relationship with their students and understand their students' mental states through mentalization (Swan & Riley, 2015). In order to create rapport (Catt, Miller, & Schallenkamp, 2007; Frisby &

* Corresponding author. Pamukkale University, Faculty of Education, English Language Teaching Programme, 20070, Kınıklı, Denizli, Turkey.
E-mail addresses: catmaca@pau.edu.tr, caglaatmaca.2090@gmail.com, caglaatmaca90@hotmail.com (Ç. Atmaca), frizaoglu@pau.edu.tr (F. Rızaoğlu), tturkdogan@pau.edu.tr (T. Türkdoğan), demety@pau.edu.tr (D. Yaylı).

Martin, 2010; Jorgenson, 1992) and a positive learning environment with a low level of stress (Krashen, 1982), empathy seems to be an important skill for a teacher. In this regard, empathy training can be introduced to teachers as a set of cognitive and behavioural elements with various strategies so that they can benefit from mentalizing to promote self-awareness, respect and tolerance for their stakeholders (Swan & Riley, 2015).

The increasing popularity of teacher emotions results from the fact that it helps teachers to cope with their emotional status (Chan, 2008), teacher burnout (Chang, 2009) and increases their motivation to work harder (Gardner & Stough, 2002). Because teaching is considered to be an occupation with 'emotional labour' (Hargreaves, 2000), teachers might experience high amounts of stress, job dissatisfaction and constraints in their psychological well-being (Chan, 2006). In this respect, emotional exhaustion is one of the components of burnout and has close ties with personal and professional stress (Freudenberger, 1974), yet there is still a lack of research studies which specifically deal with the relationship between teacher emotions and burnout (Frenzel & Stephens, 2013).

Educational reforms conducted in Turkey have been reported to suffer from serious problems in that the reforms were considered to be ineffective owing to lack of improvements in core educational practices and basic systems (Aksit, 2007), the centralized education system, insufficient sources, lack of in-service teacher training to implement the curriculum changes, especially in the initial stages (Kırkgöz, 2008, 2009), lack of introduction of educational changes by field experts (Duman, Kural Baykan, Köroğlu, Yılmaz, & Erdoğan, 2014).

As to the starting point of the current study, it has been argued that teacher stress in Turkey may partly result from these aforementioned educational reforms and system changes. In search of a tool for detecting the emotional states of teachers in Turkey, this study adapted Chen's Teacher Emotion Inventory (TEI) (2016), which includes diverse emotions, namely joy, love, sadness, anger and fear. Another reason for adapting the inventory is the highly dynamic structure of the educational context in Turkey, which resembles that of China and Hong Kong in which the inventory was developed. Despite the increasing number of publications on teacher emotions, no body of research has provided a straightforward answer about teacher emotions in relation to job satisfaction and burnout, and there is a dearth of research regarding the correlations among these three variables. Thus, this study aimed to find out the correlations among teacher emotions, teacher burnout and job satisfaction in order to display the complex nature of teacher emotions.

## 2. Review of literature

### 2.1. Teacher emotions

Research studies on student motivation have paved the way for further research on teacher motivation capturing the Zeitgeist in teacher education research (Watt & Richardson, 2008). Thus, the current body of research has been devoted to teacher motivation. Numerous studies have been conducted upon why people choose teaching as a profession, why they leave teaching, teachers' job satisfaction and teacher identity; however, teacher emotion has created a multiplier effect (Richardson & Watt, 2010). To exemplify, in a study on pre-service teachers, intrinsic value, social utility value (resembling altruism) and perceived teaching ability were found to be the most effective influences on choosing teaching as a profession in the Australian context and the participants reported high level of satisfaction with their preferences for choosing teaching profession (Watt & Richardson, 2007). However, what

emotional motives are involved during teaching in different contexts with different teaching experiences and what other psychological aspects are involved in the sustainability of the teaching profession are still open to debate.

Much has been written about the vital importance of teacher emotions and a growing body of research has focused on this subject in the last decades due to its importance in classroom management and student behaviour (Hagenauer, Hascher, & Volet, 2015) as well as its relationships with self-concept (Lohbeck, Hagenauer, & Frenzel, 2018). Other variables that have been investigated in relation to teacher emotions are the effects of curriculum change over teachers' emotions (Darby, 2008; Hargreaves, 2005; Lee, Huang, Law, & Wang, 2013), initial teacher education programs and pre-service teachers (Bloomfield, 2010; Justice & Espinoza, 2007; Wurf & Croft-Piggin, 2015). The importance of emotions also comes from the fact that they are an important part of personal well-being (Gross & John, 2003) and that they influence students' academic achievement (Valiente, Swanson, & Eisenberg, 2012).

Previous research on teacher emotions has focused on the relationship between various teaching-related constructs and emotions. The primary focus has been on enjoyment, anxiety, and anger emotions since they usually stand out as critical components for teachers working in the classroom (Frenzel, Becker-Kurz, Pekrun, & Goetz, 2015; Hagenauer et al., 2015; Scherer, Wranik, Sangsue, Tran, & Scherer, 2004). Gains in enjoyment and decreases in anger are predicted by teachers' self-concept of pedagogical skills whereas a higher subject content knowledge is linked to lower anxiety among teachers (Lohbeck et al., 2018). This study on 248 teachers in Germany illustrated that pedagogical skills, subject content knowledge, consulting, innovation, media use, diagnostics, all of which are included in self-concept, were positively related to enjoyment and negatively related to anxiety and anger.

Teacher enjoyment is closely related to good student-teacher relationships, student engagement, student enjoyment and motivation and is mediated by teacher enthusiasm (Frenzel, Goetz, Lüdtke, Pekrun, & Sutton, 2009; Hagenauer et al., 2015; Hargreaves, 2000). It is also important to distinguish between teaching enthusiasm and subject enthusiasm since the latter does not have strong ties with the teacher's well-being and students' perceptions of instruction (Kunter, Frenzel, Nagy, Baumert, & Pekrun, 2008; Kunter, Frenzel, Nagy, Baumert, & Pekrun, 2011). The negative emotions of anger and anxiety may result from discipline and class management problems, especially among inexperienced teachers (Becker, Keller, Goetz, Frenzel, & Taxer, 2015; Hagenauer et al., 2015; Sutton & Wheatley, 2003). However, teachers' appraisals of such situations and coping behaviours can mediate negative effects (Becker et al., 2015). Based on a cross-sectional study on 230 teachers working in Britain, Evans, Butterworth, and Law (2019) have concluded that perceived student misbehaviour is connected with negative teacher emotions and that teachers' inner representations regarding their student relationships are of importance for building rapport and sustaining their well-being. They also highlighted the integration of reflective teaching practices into in-service teacher training programmes.

In one of the recent studies, 149 students in Switzerland rated their teachers' emotions (i.e., joy, anger and anxiety), instructional behaviours and their own emotions, and it was found that teacher emotions affected student emotions in a classroom environment (Becker, Goetz, Morger, & Ranellucci, 2014). In another study, based on 132 teacher responses in the Austrian context, Hagenauer et al. (2015) focused on the effects of the interpersonal dimension of teacher-student relationships on teacher emotions and concluded that teachers' joy, anxiety, and anger were influenced by teacher-student rapport and student engagement. Other emotions

investigated in teacher emotion research include pride, shame, inadequacy, boredom (Becker, 2011; Taxer & Frenzel, 2015), uncertainty in the continually changing conditions (Britzman, 2007) and pity (Weiner, 2007). Pride over self and student achievement is one of the most prominent emotions reported in the studies (Becker, 2011). As one of the stakeholders in education, school principals also experience emotional labour in their daily social interactions in the workplace. The results of a structural equation modelling study on 1320 school principals in Australia has revealed that the participants had high levels of emotional demands at work, burnout, and job satisfaction, and that emotional demands predicted the usage of emotional labour strategies (Maxwell & Riley, 2016). Moreover, these principals were found to hide their real emotions when expected to respond to a specific situation emotionally and consequently their well-being states were found to be negatively affected by this condition.

Most of the existing research and theories on teacher emotions have focused on Western educational contexts, which confines the generalizability of the findings. As to the other contexts, Hosotani and Imai-Matsumura (2011) centred their study on the effects of school culture over teacher emotions in Japan and underlined the need for emotion management training for experienced and novice teachers. In the context of Mainland China and Hong Kong, Chen (2016) developed and administered Teacher Emotion Inventory (TEI) to 1830 primary school teachers and found that joy was the most experienced emotion, while love was the least experienced emotion among the teachers. Positive emotions were usually derived from interactions with students, colleagues, parents and the public while negative emotions were usually experienced as a result of frequent policy changes, unfair treatment, collegial competition, family-work imbalance and social pressure. The negative influence of recurrent education reforms in China on teacher emotions has been corroborated in other studies. Teacher attitudes and emotions with regard to the educational reforms in China have been characterized by pain and helplessness, anxiety, and other mixed emotions (Lee et al., 2013).

With regard to teacher emotions in the context of Turkey, the amount of research is limited as in the international context. Much of the related work confirms the existence of burnout among teachers of various subjects and levels (Kırılmaz, Çelen, & Sarp, 2003) and principally addresses the emotions of pre-service teachers. To illustrate, a small-scale study on anger reports higher anger scores among pre-service teachers of mathematics compared to those of other branches (Yöndem & Bıçak, 2008). It is also suggested that pre-service teachers living in small areas tend to have a higher level of anger (Kısaç, 2009). Another study stresses the importance of school principals' attitudes towards teachers' emotions for a peaceful working atmosphere and cautions that although teachers may exhibit positive emotions, they may actually be experiencing negative emotions like anger and anxiety at the same time (Argon, 2015). Anger management, language barrier between students and teachers, parents' and administrators' underestimation of teachers and isolation from other teachers were also reported as problems in a qualitative study on novice early education teachers' emotions (Kotaman, 2016).

The degree of variability among teachers and contexts may differ depending on the emotions. For instance, the emotion of anger is reported to be highly context-specific and anxiety seems to be more dependent on personality traits. Academic subject and the student profile are other situational factors which influence teacher emotions (Frenzel et al., 2015). Another external situational factor influencing teacher emotions is the level of schooling. Research suggests that emotional intensity decreases as the level of schooling increases and more emotional distance is observed in

secondary and high schools in comparison with primary schools (Hargreaves, 2000).

Research on teacher emotions informs us about the challenges encountered by pre- and in-service teachers and encourages the incorporation of these issues in teacher education programs, as exemplified by the provision of in-service support programs by counsellors or experienced colleagues (Jenkins, Charteris, Bannister-Tyrell, & Jones, 2017; Timoštšuk & Ugaste, 2012). It is important for teachers to be aware of, express and regulate their emotions. In this respect, it has been reported that positive emotions are usually expressed, yet negative emotions are hidden and fake positive emotions, that is, reporting positive emotions despite having negative emotions is common among teachers, which has negative consequences for well-being (Taxer & Frenzel, 2015). For this reason, training in emotional intelligence as well as the inclusion of stress reduction and mindfulness programs are some of the ways suggested for increasing self-efficacy, job satisfaction, coping skills, resilience and stress management (Stough, Saklofske, & Parker, 2009).

A review of teacher emotion studies highlights that the majority have employed qualitative data collection methods such as diary records and interviews for measuring the frequency and intensity of the experienced emotions (Frenzel, 2014). Ethnographic methods such as participant observation, field notes and video recording have also been utilized in case studies (Madrid, Baldwin, & Frye, 2013). It should be noted that in self-reports, the role of positive emotions might be overemphasized and the incidences of negative emotions might be undermined for fear that expressing such emotions might be negatively evaluated by others. According to some researchers, retrospective recall based records of emotions might be unreliable due to memory constraints or biased incidences (Carson, Weiss, & Templin, 2010). Therefore, more quantitative studies are needed in order to inquire into teacher emotions.

All in all, teacher emotion research findings display that teacher emotion is multi-dimensional, impacts on student learning and achievement and on the professional competencies of teachers aside from contributing to their psychological and physical health (Dresel & Hall, 2013). Drawing attention to the gaps in teacher emotion research, Richardson and Watt (2010) advocate that multiple data sources from different types of teachers and different teaching settings are required in order to elucidate the complexities of teacher motivation, to make comparisons among different teaching contexts, and to relate teacher motivations and teacher emotions.

### 2.2. Teacher burnout

Research on teacher emotions is limited and mostly confined to the emotions experienced in the classroom, yet there is extensive research on teacher burnout and stress (Vandenberghe & Huberman, 1999). Burnout refers to "emotional and physical exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do 'people work' of some kind" (Maslach, 1982, p. 3). As in other professions, fields of work which require a high amount of human interaction, job stress and personal engagement may trigger burnout in teachers (Frenzel & Stephens, 2013). Repeated exposure to demanding student behaviour and class management problems may distort teachers' appraisals of their self-efficacy and perceived support and increases the level of job-related stress and negative emotions (Brouwers & Tomic, 2000; Chang, 2009; Friedman, 2003; Montgomery & Rupp, 2005; Skaalvik & Skaalvik, 2007).

The path to burnout is usually characterized by enthusiasm in

the initial stages of the profession, leaving its place to high degrees of stress, disappointment, apathy, and ultimately a dramatic decrease in willingness to socialize. However, there is much dispute in the behaviours associated with burnout. Personal factors such as high degrees of neuroticism (i.e., high levels of anxiety, low self-esteem, and obsession), perfectionism, and tendency to sacrifice oneself for others make teachers more vulnerable to burnout (Basım, Beğenirbaş, & Yalçın, 2013; see Montgomery & Rupp, 2005 for a review). Moreover, environmental factors related to the workplace, such as sharing work with colleagues, administrators' leadership style (Korkmaz, 2005), education reforms and time pressure (Cross & Hong, 2012; Grayson & Alvarez, 2008; Skaalvik & Skaalvik, 2010) may contribute to the formation of burnout. Since each teaching setting is unique with its differing features, each context deserves a careful look. According to a study by Khani and Mirzaee (2015) carried out in Iran with 216 teachers, while contextual factors directly influence teacher burnout, they might also indirectly increase stressors that result in increased burnout. It is proposed that acting as a mediator or moderator, teacher self-efficacy could decrease the negative effects of contextual factors and stressors on teacher burnout.

Another study on teachers from different levels of schools reports that burnout stems mostly from emotional exhaustion rather than personal accomplishment and depersonalization (Yılmaz, Altınkurt, Guner, & Sen, 2015). In the same study, surface acting, namely hiding one's real emotions (Hochschild, 2003), was found to be less common in cases of emotional labour. Behavioural differences were also obtained in relation to school type; primary school teachers were found to display more surface acting than high school teachers and experience less depersonalization than vocational school teachers.

With regard to the relationship between emotions and burnout, a study carried out in Italy with 149 primary school teachers suggests that lack of emotional competence may distort the perception of social support (Fiorilli et al., 2017). The study demonstrates that the link between emotional intensity of negative situations and satisfaction with received social support is partially mediated by burnout.

## 2.3. Job satisfaction

Teacher job satisfaction denotes teachers' emotional relations with their job and perception of the outcomes of the teaching task (Zembylas & Papanastasiou, 2004). Intrinsic sources of job satisfaction are motivation to make a positive difference in others' lives (Scott, Stone, & Dinham, 2001), feelings of belonging and emotional exhaustion (Skaalvik & Skaalvik, 2011), and the positive emotion of enjoyment while extrinsic sources of job satisfaction include the salary, status, and school support (Afshar & Doosti, 2016; Stride, Wall, & Catley, 2007) and school administrators' leadership styles (Cerit, 2009). Factors which lead to burn-out (i.e., stress, high workload, and lack of planning time) also cause job dissatisfaction (Liu & Ramsey, 2008). Klassen and Chiu (2010) suggest that teacher self-efficacy is a strong predictor of job satisfaction; especially teachers with good class management and instruction skills tend to have greater job satisfaction. Interestingly, in the same study, the teachers with higher stress levels are reported to have higher classroom management self-efficacy, which implies that a certain level of stress is actually useful for job performance and satisfaction. In terms of gender, female teachers are usually reported to have higher job satisfaction levels (Klassen & Chiu, 2010; Skaalvik & Skaalvik, 2011).

Teachers' job satisfaction is partly determined by their classroom management self-efficacy, instructional strategies self-

efficacy and classroom stress (Klassen & Chiu, 2010). Servant leadership attitudes of school principals also affect teachers' job satisfaction to a great extent (Cerit, 2009). Thus, a positive school culture and democratic management can enhance teachers' satisfaction and increase their motivation at their workplaces. Even school principals' humour can create a positive school environment, add enjoyment to learning-teaching process and increase teachers' job satisfaction (Hurren, 2006). Another job satisfaction study conducted in Turkey with 500 teachers demonstrate that perceived organizational support, goal progress and positive effect significantly and positively predicted the participating teachers' job satisfaction levels. School type was observed to interact with goal progress and perceived organizational support. While perceived organizational support was found to be more strongly linked to job satisfaction for elementary school teachers, goal progress was found to be more strongly linked to job satisfaction for secondary school teachers (Büyükgöze-Kavas, Duffy, Güneri, & Autin, 2014). Finally, Atmaca (2017) investigated the perspectives of a group of in-service English teachers in Turkey about their job satisfaction and burnout. According to the results, teaching experience was the only demographic variable which was correlated with job satisfaction and burnout at a low level. It was added that job satisfaction and burnout were negatively related to each other at a low level. Shareholders, self-efficacy, physical and social environment were found to have an important influence on teacher burnout. The participating teachers suggested that teachers should be involved in decision-making process, there should be more respect from the society, they should participate in more projects, receive prizes for their success and there should be less crowded classrooms and more labs specific for English teaching, to name but a few.

All in all, there has been a heavy emphasis on teacher emotions due to their prominent relationships with various factors like burnout and job satisfaction. Importance of teacher emotions is also reflected in the increasing body of research published in *Teaching and Teacher Education (TATE)* in recent years. The rationale for this study is underpinned by the findings which suggest that the concept of teacher emotion is still open to debate and necessitates further research. Uitto, Jokikokko, and Estola (2015) examined the articles published in *TATE* between 1985 and 2014 and concluded that many of these studies focused on teacher identity and professional learning, emotional exhaustion, educational contexts and reforms, student emotions, emotional intelligence, and regulation of emotions with regard to teacher emotions. Following this line of research perspective, the authors of the present study believe that the concept of teacher emotion is in need of theorization and conceptualization. Also, the lack of research studies which deal with teacher emotions in different countries and the relationship between teacher emotions and other variables such as job satisfaction and burnout, gave the impetus for the present study.

The main aim of the current study was to investigate the emotions experienced by teachers in Turkey and to find out the potential link between emotions, job satisfaction and burnout in this context. This study arose in response to a niche for teacher emotion research and consisted of several stages, such as (1) the application and adaptation of Teacher Emotion Inventory (TEI) developed by Chen (2016) into Turkish, (2) an examination of the independent correlations of the emotional dimensions with job satisfaction (with the use of Minnesota Job Satisfaction Questionnaire - MSQ) and burnout (with the use of Maslach Burnout Inventory-Educators Survey - MBI-SE), and finally (3) multiple linear regression analyses to examine the combined effect of teacher emotions in predicting job satisfaction and burnout. Especially, by integrating job satisfaction and teacher burnout, the current study aimed to offer a unique and multifaceted perspective towards a better

understanding of teacher emotions. The combination of a widely used burnout inventory and job satisfaction scale with a recently devised emotion inventory is of great importance due to the increasing importance of teacher emotions and their influence on teacher education and teaching practice. It is hoped that this research will contribute to an understanding of teacher emotion, job satisfaction and teacher burnout. In this way, this research aimed to cater for the needs of the current teacher education research in a different context and from a different perspective.

## 3. Methodology

The aims of the present study were to use an existing inventory (TEI) in a different teaching context and examine its relation to two different variables: burnout and job satisfaction. Therefore, initially, the inventory underwent back-translation (i.e., from English to Turkish language and from Turkish to English) as suggested in Paegelow (2008). Following a quantitative design, the study sought to examine the construct validity of TEI based on confirmatory factor analysis and the correlations among teacher emotions, burnout and job satisfaction. Also, with regression analyses, we aimed to check the possible role of teacher emotions in predicting job satisfaction and burnout. To this end, the following questions were formulated:

1. What are the participating teachers' emotion levels according to the five-factor model of TEI?
2. Does TEI correlate with burnout as measured by MBI-SE and job satisfaction scores as measured by MSQ?
3. Do teacher emotions have a significant role in predicting burnout and job satisfaction?

It is indicated that cross sectional studies where mainly questionnaires are adopted are used to determine prevalence since they are relatively quick, cheap, easy and beneficial for identifying associations; however, cross-sectional studies do not allow for making an absolute distinction between cause and effect (Mann, 2003). These studies are also used for inspecting causation but causation is not among the research questions or within the scope of the current study. Specifically, this study is a cross-sectional study aiming to check the validity of an adapted version of a teacher emotion inventory, and to make some predictions with regard to teacher emotions, job satisfaction and teacher burnout but making conclusions about causation.

### 3.1. Back translation procedures

The back-translation of TEI was carried out by the researchers (three language education researchers and a psychological counselling researcher) during several meetings following the guidelines in Maneesriwongul and Dixon (2004). Initially, each researcher translated the items from English to Turkish, and then they translated their own Turkish translations into English and compared each item against the original version. Subsequently, the researchers came together to discuss the translated version of each item word by word until there was 100% agreement on the end-product among all the researchers.

### 3.2. The research sample

The research population targeted in-service teachers working at state schools in Turkey. Convenience sampling was used for reaching the participants. The researchers started data collection in state schools in their city of residence, Denizli. Located in the southwest of Turkey, this city is the second largest city in the Aegean Region. In order to increase the generalizability of the findings, data collection expanded to two nearby cities, Afyon and

Uşak, which are socio-economically less developed (SEGE, 2011). Convenience sampling was preferred due to its practicality in reaching high numbers of people within a short time frame (Dörnyei, 2007). Prior to data collection, a pilot study was carried out with 11 participants who filled out the translated version of TEI. Subsequently, 28 participants filled out TEI together with Maslach Burnout Inventory and Minnesota Job Satisfaction Questionnaire for piloting purposes. Slight changes were made in the wording of some instructions after the piloting. In the main study, 581 teachers from three different cities in Turkey completed the instruments; however, 17 were excluded from analysis due to incomplete responses. Finally, regression analyses on job satisfaction ($n = 283$) and burnout ($n = 298$) were performed with two sub-samples.

In terms of educational context, the selected cities are small-to-medium sized considering their population and their higher literacy rates compared to the cities in the eastern regions of Turkey (TÜİK, 2019). Since the majority of young teachers in Turkey have to teach in the disadvantaged areas of the country (usually in the eastern regions) in the initial years of their service, the sample comprised predominantly experienced teachers.

### 3.3. Instruments

**Teacher Emotion Inventory (TEI):** TEI presents a set of generic items about teacher emotions which encompasses five dimensions: *joy*, *love*, *sadness*, *anger*, and *fear* (Chen, 2016). The scale includes 26 items that are evaluated using a 6-point Likert scale. The fit of the factors was found to be satisfactory as a result of confirmatory factor analysis ($\chi^2 = 1777.35$; df = 289; $\chi^2/df = 6.15$; p = .02; RMSEA = 0.062, 90% CI = 0.060-0.062; SRMR = 0.058; TLI = 0.91; NFI = 0.91; CFI = 0.92; and gamma hat = 0.91). The Cronbach's alpha values for the items were reported to be high, with values within the range of 0.73−0.90 and with an average item reliability value of 0.84.

**Maslach Burnout Inventory-Educators Survey (MBI-ES):** MBI-ES aims to measure the degree of burnout among educators and includes 22 items that are evaluated via a 7-point Likert scale (Maslach, Jackson, & Schwab, 1996). The Turkish adaptation of the scale was performed by İnce and Şahin (2015). The items in MBI-ES reflect the three-factor model of burnout: *emotional exhaustion*, *depersonalization* and *personal accomplishment*. The construct validity of the scale was confirmed within the current study [$\chi^2$ ($N = 298$) = 457.57, $p < .001$; $\chi^2/df = 2.31$; GFI = 0.88, AGFI = 0.84, CFI = 0.90, RMSEA = 0.066, SRMR = 0.074].

**Minnesota Job Satisfaction Questionnaire (MSQ):** MSQ aims to measure the degree of job satisfaction among employees and includes 20 items that are evaluated via a 5-point Likert scale (Weiss, Dawis, England, & Lofquist, 1967). The Turkish adaptation of the scale was carried out by Baycan (1985). The items in MSQ are grouped into two, referring to two types of job satisfaction: *intrinsic satisfaction* and *extrinsic satisfaction*. The construct validity of the scale was also confirmed within the current study [$\chi^2$ ($N = 283$) = 378.98, $p < .001$; $\chi^2/df = 2.37$; GFI = 0.89, AGFI = 0.85, CFI = 0.89, RMSEA = 0.070, SRMR = 0.062].

### 3.4. Procedures

The data were gathered in the 2017−2018 academic year with the voluntary participation of in-service teachers working at state schools in Turkey. Prior to the administration of the inventory, permission was obtained from Denizli Directorate of National Education (MoNE) to apply the inventories at state schools. There were two different sets of instruments; the first included TEI and MBI-ES forms while the other set included TEI and MSQ forms. An

equal number of both sets of instruments were distributed to teachers with the help of the school principals and collected by the researchers who visited the schools again a few days later.

### 3.5. Participants

The participants were 564 in-service teachers working at state schools in Denizli (n = 455), Afyon (n = 15) and Uşak (n = 94) cities, in the southwest of Turkey. Of the teachers, 286 (50.7%) were female and 278 (49.3%) were male. The age range of the participants was 23−64, with a mean of 42.6. Seven participants did not reveal any information about their age. As for teaching experience, the range in years was 0−47, with a mean of 19.4. Nine teachers did not reveal any information about their teaching experience. Regarding their weekly teaching hours, the range was 0−46 h, with a mean of 24.6. Seventeen participants did not reveal any information about their weekly class hours. As shown in Table 1, the participating teachers served at various levels and branches at state schools.

### 3.6. Data analyses

Confirmatory factor analysis was used to examine the construct validity of the scales and *maximum likelihood* was used as the estimation method (Creswell, Plano Clark, Gutmann, & Hanson, 2003). The analyses were run in AMOS (Analysis of Moment Structures). Furthermore, multiple linear regression analyses

**Table 1**
Participating Teachers' School Types and Branches.

|                    | Category                                  | N   | %    |
|--------------------|-------------------------------------------|-----|------|
| Level of Schooling | Preschool                                 | 10  | 1.8  |
|                    | Primary school                            | 167 | 29.6 |
|                    | Secondary school                          | 197 | 34.9 |
|                    | High school                               | 190 | 33.7 |
|                    | TOTAL                                     | 564 | 100  |
| Branch             | Classroom                                 | 159 | 28.2 |
|                    | Mathematics                               | 53  | 9.4  |
|                    | English                                   | 48  | 8.5  |
|                    | Turkish                                   | 38  | 6.7  |
|                    | Turkish Language and Literature           | 32  | 5.7  |
|                    | Science                                   | 27  | 4.8  |
|                    | Religious Culture and Moral Knowledge     | 21  | 3.7  |
|                    | Psychological Counselling and Guidance    | 17  | 3    |
|                    | Technology Design                         | 15  | 2.7  |
|                    | History                                   | 14  | 2.5  |
|                    | Physical Education                        | 14  | 2.5  |
|                    | Biology                                   | 12  | 2.1  |
|                    | Social Studies                            | 11  | 2    |
|                    | Pre-school                                | 10  | 1.8  |
|                    | Chemistry                                 | 9   | 1.6  |
|                    | Physics                                   | 9   | 1.6  |
|                    | Philosophy                                | 8   | 1.4  |
|                    | Technique                                 | 8   | 1.4  |
|                    | Visual Arts                               | 8   | 1.4  |
|                    | Theology                                  | 7   | 1.2  |
|                    | Geography                                 | 6   | 1.1  |
|                    | German                                    | 6   | 1.1  |
|                    | Music                                     | 6   | 1.1  |
|                    | Special Education                         | 6   | 1.1  |
|                    | Information Technology                    | 4   | 0.7  |
|                    | Furniture and Decoration                  | 3   | 0.5  |
|                    | Accounting and Finance                    | 2   | 0.4  |
|                    | Mechanics                                 | 2   | 0.4  |
|                    | Motor Vehicles Technology                 | 2   | 0.4  |
|                    | Electric-Electronics                      | 1   | 0.2  |
|                    | Russian                                   | 1   | 0.2  |
|                    | Not stated                                | 5   | 0.9  |
|                    | TOTAL                                     | 564 | 100  |

(Tabachnick & Fidell, 1996) were run in SPSS (Statistical Package for the Social Sciences) to examine the role of teacher emotions in predicting job satisfaction and burnout.

### 4. Findings

Before performing the analyses, the normal distribution assumption was checked on the basis of the skewness coefficients that ranged between −1 and +1 (Hair, Black, Babin, & Anderson, 2010). As the descriptive statistics of the research variables demonstrate in Table 2, the normal distribution assumption was met in TEI.

As the data attest, in TEI, the Joy dimension had the highest rating among the five dimensions, with a mean of 5.68 on a 6-point scale, followed by Anger, Sadness, and Love respectively. In the same instrument, Fear received the lowest mean ranking, with a greater standard deviation. The mean rating in the Job Satisfaction Survey was 3.84 on a 5-point scale. The 7-point Burnout inventory had the lowest score among the three instruments, with a mean of 2.5 and a low standard deviation.

The five-factor model of TEI was successfully confirmed within the current study [$\chi^2$ ($N = 564$) = 732.26, $p < .0001$; $\chi^2/df = 2.56$; GFI = 0.91, AGFI = 0.89, CFI = 0.90, RMSEA = 0.053, SRMR = 0.056] (See Fig. 1). On the other hand, the Cronbach's alpha coefficient was 0.67 for the Joy, 0.69 for the Love, 0.77 for the Sadness, 0.84 for the Anger, and 0.82 for the Fear dimensions. If item 01 in the Joy dimension was to be deleted, the internal consistency would rise to 0.70. However, in order to keep the original version of the inventory and considering the fact that it had construct validity, it was decided that this could be tolerated and the item was kept in the inventory.

In the items, the data also signalled that the highest factor loading (0.86) belonged to the Love dimension item, "I love my teaching job because it is a profession which could obtain respect and recognition from society." (see Table 3). The remaining factor loadings were above 0.40, except for two Joy-related items: "I am motivated by students 'care" (0.28), "I feel proud when I see my students make progress." (0.28) and except for the Love-related item "I love teaching because the wage is reasonable." (0.38). Since convergent and divergent validity were maintained in the later correlations with the other teaching constructs, these items were kept in the adapted version. The inter-correlations between Joy and Love were high (0.41), which might be the reason for the low factor loadings in two Joy-related items and one of the Love items. There was a high correlation between Sadness and Anger (0.73). There were medium level correlations between Anger and Fear (0.44) and between Sadness and Fear (0.37). In addition, there was a medium-level correlation between Joy and Sadness (0.42), which stems from the fact that these statements interrogated whether students, parents, and administrators exert positive influence on teacher emotions. On the other hand, the statements in the Sadness dimension were related to the negative effect of the stakeholders on teacher emotions, which did not necessitate

**Table 2**
Descriptive Statistics about the Research Variables.

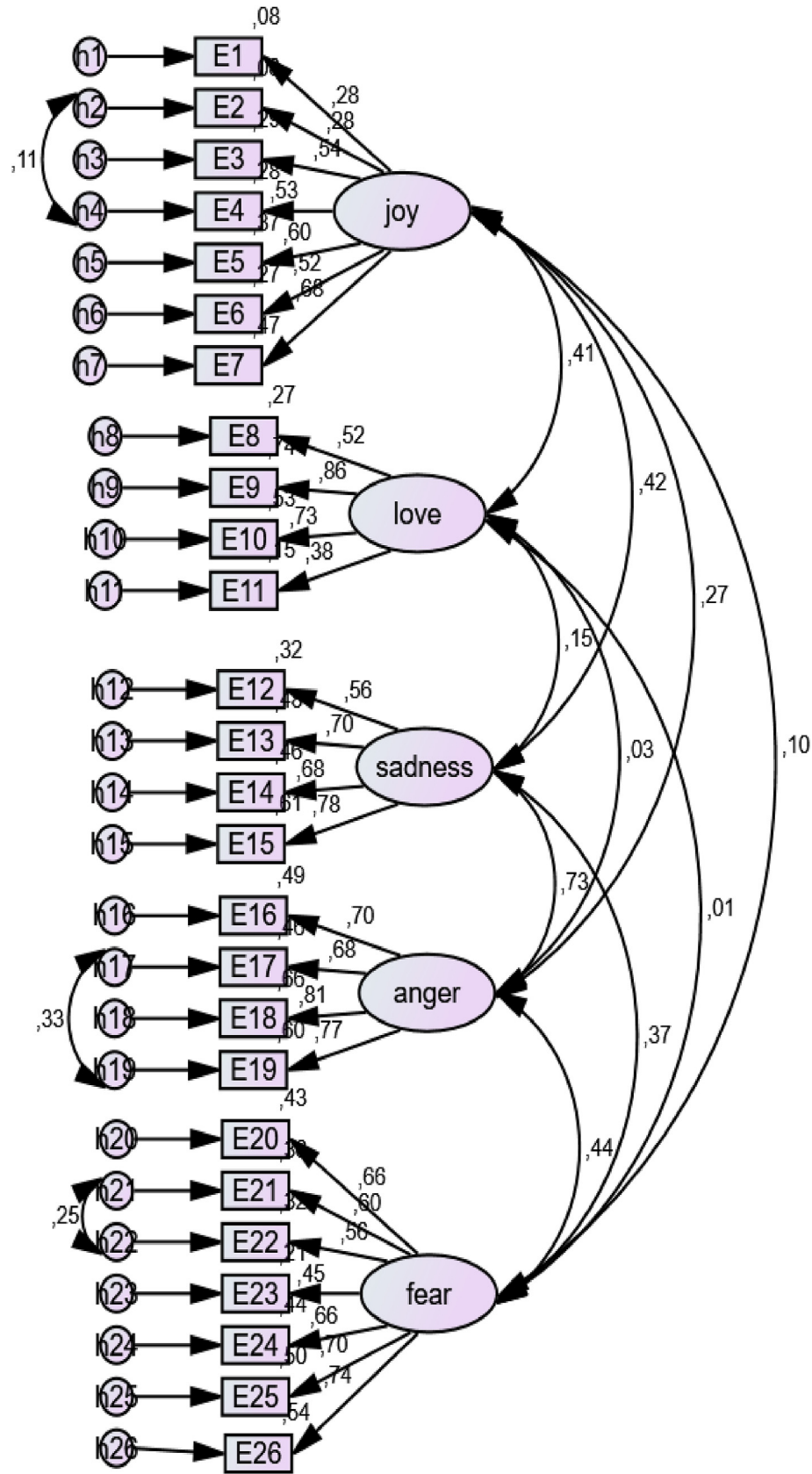|                  | N   | Min. | Max. | M    | SD   | Skewness |
|------------------|-----|------|------|------|------|----------|
| Joy              | 564 | 4.57 | 6.00 | 5.68 | .38  | −1.07    |
| Love             | 564 | 1.00 | 6.00 | 4.52 | .97  | -.67     |
| Sadness          | 564 | 1.50 | 6.00 | 4.59 | 1.09 | -.54     |
| Anger            | 564 | 1.00 | 6.00 | 4.72 | 1.10 | -.80     |
| Fear             | 564 | 1.00 | 6.00 | 3.04 | 1.05 | .35      |
| Job satisfaction | 283 | 1.40 | 5.00 | 3.84 | .53  | -.54     |
| Burnout          | 298 | .78  | 4.63 | 2.50 | .66  | .92      |

**Fig. 1.** Confirmatory factor analysis results for Teacher Emotion Inventory (Standardized solution). *Note*: $\chi^2$ ($N$ = 564) = 732.26, $p$ < .0001; $\chi^2/df$ = 2.56; *GFI* = 0.91, *AGFI* = 0.89, *CFI* = 0.90, *RMSEA* = 0.053, *SRMR* = 0.056.

**Table 3**
Factor loadings for items of TEI.

|  | Emotion | Load |
|---|---|---|
| **Joy** | | |
| 1 | I am motivated by students' care. | .28 |
| 2 | I feel proud when I see my students make progress. | .28 |
| 3 | I am glad that my students enjoy my teaching. | .54 |
| 4 | I am so exciting when my students interact with my teaching. | .53 |
| 5 | I am motivated by support from my colleagues and leaders. | .60 |
| 6 | I enjoy sharing with my colleagues. | .52 |
| 7 | I am moved for parents' understanding and support. | .68 |
| **Love** | | |
| 8 | I love my teaching job because I could see how our next generation grows up which is different from other jobs. | .52 |
| 9 | I love my teaching job because it is a profession which could obtain respect and recognition from society. | .86 |
| 10 | I love my teaching job because it is stable. | .73 |
| 11 | I love teaching because the wage is reasonable. | .38 |
| **Sadness** | | |
| 12 | I feel really sad when my students fire up at me. | .56 |
| 13 | I feel disappointed when my school leaders ignore my efforts and contributions. | .70 |
| 14 | I feel frustrated when my promotion is stuck by stiff policies. | .68 |
| 15 | I feel disappointed when I do not get what I should get. | .78 |
| **Anger** | | |
| 16 | I am annoyed when I am misunderstood by parents. | .70 |
| 17 | I am indignant when the society and/or public blame our teachers without any evidence. | .68 |
| 18 | I feel angry when I am treated unfairly (i.e., workload arrangement, salary level). | .81 |
| 19 | I feel angry when the society and/or public misunderstand our teachers. | .77 |
| **Fear** | | |
| 20 | I feel pressured from high expectations of parents. | .66 |
| 21 | I am worried about how to improve my student engagement and achievement. | .60 |
| 22 | I am worried about competition with my colleagues. | .56 |
| 23 | I am worried that students don't take responsibility for their study. | .45 |
| 24 | I feel pressured about imbalance of work and life. | .66 |
| 25 | I feel pressured when I suffer from shortage of time with too much work. | .70 |
| 26 | I feel pressured that my students could not accept my new teaching style which are adjusted to fit new policies/or reforms (i.e., curriculum reform). | .74 |

reverse coding in these items and indicated a positive correlation between Joy and Sadness dimensions.

Anger also had high loadings. The Anger-related item, "I feel angry when I am treated unfairly (i.e., workload arrangement, salary level)." had the second highest loading among all items (0.81). The item "I feel really sad when my students fire up at me." received the lowest factor loading in the Sadness dimension (.56)., The largest factor load of Fear belonged to the item about students' negative reactions to reform-related changes in teaching (0.74). Time pressure (0.70), work-private life imbalance (0.66) and parental expectations (0.66) were the other significant sources of fear among teachers.

With regard to MBI-SE, the three-factor model of burnout comprising emotional exhaustion, depersonalization and personal accomplishment was examined by confirmatory factor analysis. An item in the personal accomplishment dimension (item12: *I feel very energetic*) was excluded because of its high tendency to factor under the other two dimensions. The construct validity of the survey was successfully confirmed in the present study [$\chi^2$ ($N = 298$) = 367.56, $p < .0001$; $\chi^2/df = 2.03$; $GFI = 0.90$, $AGFI = 0.87$, $CFI = 0.92$, $RMSEA = 0.059$, $SRMR = 0.061$]. The Cronbach's alpha coefficient was found to be 0.89 for emotional exhaustion, 0.76 for depersonalization, and 0.75 for personal *accomplishment* dimensions within the current study.

As for MSQ, the two-factor model of job satisfaction which includes intrinsic satisfaction and extrinsic satisfaction was examined by means of confirmatory factor analysis, and the construct validity was successfully confirmed within the current study [$\chi^2$ ($N = 283$) = 367.87, $p < .0001$; $\chi^2/df = 2.31$; $GFI = 0.89$, $AGFI = 0.85$, $CFI = 0.90$, $RMSEA = 0.068$, $SRMR = 0.060$]. Furthermore, the Cronbach's alpha coefficient was found to be 0.84 for the intrinsic satisfaction, and 0.79 for the extrinsic satisfaction dimensions.

Additionally, the Pearson correlations between the research

**Table 4**
Pearson Correlations between the Research Variables.

|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| 1. Joy | r | — | | | | | | |
|  | N | | | | | | | |
| 2. Love | r | .30** | — | | | | | |
|  | N | 564 | | | | | | |
| 3. Sadness | r | .33** | .14** | — | | | | |
|  | N | 564 | 564 | | | | | |
| 4. Anger | r | .23** | .04 | .58** | — | | | |
|  | N | 564 | 564 | 564 | | | | |
| 5. Fear | r | .09* | .06 | .30** | .37** | — | | |
|  | N | 564 | 564 | 564 | 564 | | | |
| 6. Job satisfaction | r | .21** | .44** | .08 | .06 | -.09 | — | |
|  | n | 283 | 283 | 283 | 283 | 283 | | |
| 7. Burnout | r | .00 | -.27** | .25** | .22** | .44** | -.60** | — |
|  | n | 298 | 298 | 298 | 298 | 298 | 28 | |

*$p < .05$; **$p < .01$.

variables are presented in Table 4. According to the findings, Joy ($r_{(n=283)} = 0.21$, $p < .01$) and Love ($r_{(n=283)} = 0.44$, $p < .01$) dimensions exhibited positive correlations with job satisfaction, but the correlation values for the Sadness ($r_{(n=283)} = 0.08$, $p > .05$), Anger ($r_{(n=283)} = 0.06$, $p > .05$), and Fear ($r_{(n=283)} = 0.09$, $p > .05$) dimensions were statistically insignificant. Also, Love ($r_{(n=298)} = -0.27$, $p < .01$), Sadness ($r_{(n=298)} = 0.25$, $p < .01$), Anger ($r_{(n=298)} = 0.22$, $p < .01$), and Fear ($r_{(n=298)} = 0.44$, $p < .01$) dimensions exhibited significant correlations with burnout, but the correlation value for the Joy dimension ($r_{(n=283)} = 0.00$, $p > .05$) was statistically insignificant. Due to the lack of need for reverse coding in the contrasting emotions (positive versus negative emotions), low level positive correlations between Sadness and Joy ($r_{(n=564)} = 0.33$, $p < .01$), and Anger and Joy ($r_{(n=564)} = 0.23$, $p < .01$) were also observed.

**Table 5**
The Multi Linear Regression Analysis Results for the Role of Teacher Emotions in Predicting Job Satisfaction.

| Variable | Unstandardized Beta | Standard Error Beta | Standardized Beta |
|---|---|---|---|
| Joy | .145 | .086 | .100 |
| Love | .232 | .030 | .418*** |
| Sadness | .005 | .033 | .010 |
| Anger | .015 | .032 | .033 |
| Fear | -.075 | .031 | -.141* |
| Constant | 2.10 | .45 | |

$R^2 = 0.21$, $F_{(5,277)} = 15.51$, *$p < .5$, ***$p < .001$.

**Table 6**
The multi linear regression analysis results for the role of teacher emotions in predicting educators' burnout.

| Variable | Unstandardized Beta | Standard Error Beta | Standardized Beta |
|---|---|---|---|
| Joy | -.036 | .091 | -.022 |
| Love | -.211 | .035 | -.317*** |
| Sadness | .127 | .038 | .209*** |
| Anger | -.033 | .039 | -.053 |
| Fear | .252 | .032 | .418*** |
| Constant | 2.46 | .47 | |

$R^2 = 0.30$, $F_{(5,292)} = 26.04$, ***$p < .001$.

After examining the independent correlations of the emotional dimensions with job satisfaction and burnout, multiple linear regression analyses were performed in order to examine the combined effect of teacher emotions in predicting job satisfaction and burnout. Table 5 shows the multiple regression analysis results for the role of teacher emotions in predicting job satisfaction. According to the findings, Love and Fear dimensions significantly predicted job satisfaction with a medium effect; the multicollinearity assumption was checked and met, *Tolerance* = 0.80, *VIF* = 1.24, *CI* = 55.86. $R^2 = 0.21$, $F_{(5,277)} = 15.51$, $p < .001$. However, Joy, Sadness, and Anger dimensions did not exhibit a predictor role in the multiple regression analysis, and 21% of the variance in job satisfaction was explained by the Love and Fear dimensions only.

Table 6 shows the multiple regression analysis results for the role of teacher emotions in predicting burnout. The multicollinearity assumption was checked and met, $R^2 = 0.30$, $F_{(5,292)} = 26.04$, $p < .001$, *Tolerance* = 0.86, *VIF* = 1.17, *CI* = 51.41. According to the findings, Love, Sadness, and Fear dimensions significantly predicted educators' burnout with a medium effect. However, Joy and Anger dimensions did not exhibit a predictor role in the multiple regression analysis, and 30% of the variance in burnout was explained by the Love, Sadness and Fear dimensions only.

## 5. Discussion

The current study aimed to investigate the emotions experienced by a group of teachers in Turkey and to find out the potential link between emotions, job satisfaction and burnout.

### 5.1. Teacher emotions as reflected by TEI

The Cronbach's alpha reliability coefficients of the adapted TEI were above 0.70 for all dimensions, except for the Joy and Love dimensions which nearly reached 0.70. Therefore, the internal consistency of the adapted version was verified.

The adapted version of the scale confirmed the five-factor model of TEI. Thus, construct validity was assured in the confirmatory

factor analysis. The teachers mostly reported emotions of Joy in their professional experiences, which was similar to the original TEI study results (Chen, 2016) and the least frequently reported emotion was Fear. Compared to Chen (2016), Anger was more prevalent while Fear was less prevalent in the present study.

In the items, the highest factor loading belonged to the Love dimension item related to respect and recognition from society. This hints that teachers might be highly motivated by extrinsic factors such as their status in the society and are pleased with the current attitudes towards their profession. This finding is also in line with the current teacher status indices; like China and South Korea, in Turkey, teachers are more valued by the society in terms of social status compared to their colleagues in the western countries (Global Teacher Status Index, 2013). The consistency of the teaching profession was another highly ranked Joy factor; this might be explained by the relatively secure and stable working environment of teachers most of whom work with permanent work contract. In Turkey, teaching at state schools provides teachers with more security and stability in terms of working hours, off days, monthly salaries, paid leaves and holiday breaks compared to other professions.

The reason for the lower loadings for two Joy-related topics, i.e., students' care and progress might be that teachers' motivation attributions might be less student-oriented. This contrasted with Chen (2016), in which student-related factors received the highest loadings and with previous research highlighting the influence of student engagement on teachers' joy, anxiety, and anger (Hagenauer et al., 2015). The teachers in the present study might have distanced themselves from student-related factors as sources of joy or they might be viewing student progress as a natural responsibility of their profession. It should be noted that Chen's scale was administered to primary school teachers only, but this study included teachers working at secondary and high schools as well, which might have influenced the results.

In the Love dimension, the lowest factor loading was related to satisfaction with teaching salary, which implies that the participating teachers do not find their monthly wage satisfactory despite their satisfaction with their social status. The high rating of the Anger related item, which referred to unfair workload arrangement and salary reinforced this finding. This also implies some dissatisfaction with the school principals who are responsible for the workload arrangement or might be related to the heavy teaching loads at most state schools. Societal and parental pressures were also significant indicators of anger, reinforcing the importance of external factors for teachers. These findings resonate with previous research results related to discontent with salary and managers in teaching contexts (Afshar & Doosti, 2016). In parallel to Hosotani and Imai-Matsumura's (2011) findings related to the effects of school culture over teacher emotions in Japan, this study also found evidence for the influence of school culture on teacher emotions in the Turkish context.

The relatively lower loadings for the Sadness factor related to students' negative responses to teachers might be due to the fact that teachers do not experience such situations frequently or undermine the emotional weight of such encounters. In Turkey, most K12 classrooms are teacher-centred and students are expected to respect teachers' decisions and obey the rules strictly (Akar, Tantekin-Erden, Tor, & Şahin, 2010; Lozano & Kızılaslan, 2013). Therefore, student behaviours which challenge teachers might be less frequently observed compared to the Western educational contexts.

In terms of Fear, students' dissatisfaction with teaching practices after policy changes yielded the highest fear among teachers, at a higher level compared to the results in the study by Chen (2016). As in the Chinese context, radical curriculum or system changes exert

tension over teachers especially in high-stakes testing-based educational systems (Lee et al., 2013). Similarly, in Turkey, educational policy changes take place recurrently and without much piloting or planning. Major changes in the high school and university entrance exam format are commonly observed almost every year, even 4–5 months ahead of the examination date. While teachers have become accustomed to adapting to abrupt changes, they feel incompetent about implementing new curricula (Elmas, Öztürk, Irmak, & Cobern, 2014; Kalman & Bozbayındır, 2017; Samancıoğlu, Bağlıbel, Bozbayındır, & Kalman, 2015) and have to deal with students' and parents' anxiety and resistance (Koşar-Altınyelken, 2012). Teachers are willing to be involved in the decision-making processes and have more autonomy as stakeholders; however, in the highly centralized national education system, this seems to be unrealistic (Atmaca, 2017).

Heavy workload and work-private life balance were also important considerations of Fear in the present study, though at a lower degree than those reported in Chen (2016). The average teaching load of the participants was 25 h per week, with a range of 0–46, excluding preparation and grading time. On the whole, the teachers seemed to be under pressure due to this workload.

Overall, the highest loadings in the present study usually belonged to external factors such as managerial, societal and parental support for teachers. Student-related factors had varying loadings, which might indicate that teachers are not influenced by student attitudes or (mis)behaviours to a high degree, unlike the findings in the Chinese context (Chang, 2013; Chen, 2016). The most unpleasant emotions were related to disappointments and mistreatment in the workplace and society. Besides, colleague competition did not stand out as a major effect, which hints that the participating teachers do not have a very competitive or challenging atmosphere at work. This might have stemmed from the relatively competition-free teaching context because teachers in Turkey do not have distinct career advancement or promotion opportunities apart from moving to managerial positions.

### 5.2. Correlations of teacher emotions with burnout and job satisfaction, and regression

TEI's correlations with two other instruments, i.e., burnout inventory and job satisfaction survey were analysed since burnout and job satisfaction are constructs which are closely related to teacher emotions. As expected, Joy and Love of teaching dimensions were found to have positive correlations with job satisfaction, as indicators of convergent validity. Joy normally had a positive correlation with job satisfaction, but in the multiple regression analysis it lost its significance in prediction due to its combined effects, especially with Love. The dimension of professional Fear that defines pressure, anxiety, and competition was found to be a negative and significant predictor of job satisfaction, as evidence of divergent validity. On the other hand, Sadness and Anger dimensions did not have any significant correlations with job satisfaction. The lack of a negative relationship between job satisfaction and these negative emotions might stem from the observation that teachers have a tendency to undermine negative emotions in real life as well as in research surveys (Carson et al., 2010; Taxer & Frenzel, 2015) and hide or disregard their true feelings and fake being content with school practices (Hochschild, 2003; Zhang & Zhu, 2008). As shown in the descriptive statistics, the mean scores for negative emotions and the burnout scale were lower than those for the positive emotions and scales, which further supports this inference. As for burnout, a moderate portion of the construct was predicted by the emotions of love, sadness, and fear. Joy did not predict teacher burnout; this might be due to its combined effect with

Love, which proved to be a negative predictor of burnout. In the same light, when the Anger dimension was considered independently, it showed a negative correlation with burnout but lost its significance in prediction owing to its combined effect, especially with the dimension of Fear. Fear was found to be a powerful and positive predictor of burnout. Sadness predicted burnout but not job satisfaction. This finding was inconsistent with the theoretical expectations. As was explained previously, some of the items in the Sadness dimension might not be directly relevant to Turkish state schools. The case of students directly challenging teachers is not very common at state schools. Moreover, in Turkey, teaching is not a profession which has career development opportunities, a topic which was inquired in the Sadness dimension. For these reasons, its relationship with job satisfaction might be less direct and less prevalent.

## 6. Conclusion

As the importance attached to teacher emotions is increasing, the need for devices to measure teacher emotions has become more pronounced. The existing tools for measuring teacher related psychological factors mostly focus on situations like burnout and job satisfaction. Of the few available tools for measuring teacher emotions, TEI stands out as a promising instrument in Turkey's educational context. Similar to mainland China and Hong Kong where the test was devised, in Turkey there are constant and abrupt educational reforms and stakeholders have difficulties in keeping up with these changes in a short time. As the practitioners of the new curriculum, teachers experience stress and anxiety in the implementing the new arrangements and dealing with parents' and students' reactions to these changes. Additionally, teaching is already a highly challenging profession requiring intensive interaction and communication with a diverse range of students with differing competence levels and needs.

As a means of understanding and documenting teacher emotions in Turkey, TEI can be used as a reliable instrument as shown by its internal five-component structure verified in the present study. In addition, the validity of the instrument was verified through its relationships with two other teacher related construct measures, MBI-ES and MSQ. As expected, overall, positive emotions correlated with job satisfaction and negative emotions correlated with burnout. Since the sources of joy, love, sadness, anger and fear all appear to come from the same stakeholders, namely students, parents, colleagues, administrators, policy makers and society, the sources of these emotions seem to be interrelated. To exemplify, presence of student interest motivates a teacher and in the same vein, the absence of student interest demotivates the teacher. The presence or absence of the same situation can be said to either motivate or demotivate teachers in Turkey, which could eventually affect teacher emotions positively or negatively. This finding of the study is thought to be unique or specific to the context of Turkish state schools, where the relatively collectivist structure of the society plays an important part on their emotions and behavioural preferences.

There are a number of caveats that need to be mentioned in the context of this research study. It should be noted that the sample included teacher data from state schools situated in the southwest region of Turkey. The teachers working in this region are usually more experienced than those working in the eastern parts of the country. The living conditions and socioeconomic levels in this region are also more convenient compared to other parts of Turkey. Given the high popularity of the region, teachers have to gain some years of experience or very high scores in entry to profession examinations in order to serve in these regions due to the regulations. Therefore, the findings should not be generalized to teachers

working in the other regions of Turkey. Further research might include teachers from all regions of Turkey to increase the generalizability of the findings. Incorporation of qualitative analyses of teacher emotions is another line of investigation, which might facilitate the interpretation of quantitative results obtained by means of TEI.

Another implication based on the findings of this study is that the results obtained through large-scale implementation of TEI can also be used in the planning of in-service training practices in Turkey. Much in line with the study by Hosotani and Imai-Matsumura (2011), if necessary, emotion regulation training should be provided to both pre-service and in-service teachers so that they can cope with the initial profession-related stress, become aware of their emotions and learn to accept rather than disregard them.

The findings also have implications beyond the context of the study. Concerning teachers' professional survival in their teaching settings, as Badia (2018) suggests, teachers can collaborate with colleagues, set prior goals for their lessons, involve in reflection, share success with others, and attend lectures. To the advocates of this line of thinking, teachers can get peer feedback and be involved in narrative interaction with their peers to exchange ideas about their academic and practical experiences and establish a link between emotional identification and teacher identity (Karlsson, 2013). Our findings support previous studies in concluding that teachers assume different roles due to their learners' characteristics, levels, activity types and class size aside from their job requirements like in-service training activities and tasks. While switching between different roles, they may feel emotional discomfort and have difficulty in organizing various roles at the same time (Madrid et al., 2013). Not only in-service teachers but also pre-service teachers need professional help to get over their negative emotions owing to the pressures linked to some stakeholders like pupils, parents, supervisors who might sometimes influence their teaching performance negatively (Timoštšuk & Ugaste, 2012).

A further implication for teacher education programs is that teachers can set some goals before the lessons, judge whether what was planned is going smooth during their lessons and finally after the lesson, make comparisons between their previous goals and what happened in reality in order to assess their progress and teaching practices (Schön, 1983). In this way, teachers' reflective practices could assist them in being more aware of their emotions. As an *ad hoc* solution for their emotion-specific problems, if teachers evaluate their current state and make criticisms for their professional development, critical emotional reflexivity can turn into a pedagogical tool in teacher education (Zembylas, 2013). Based on the suggestions above, it can be concluded that teachers' emotional reactions will be different in line with their perspectives about goal attainment, relevance, responsibility and coping appraisal. In a way, the harmony between teachers' explicit goals and their students' observed behaviours which are seen as appraisals determines the emotional experiences of teachers. This harmony can provide teachers with opportunities to establish emotionally healthy classes as well (Frenzel & Stephens, 2013).

## 7. Limitations and suggestions for further research

In terms of the quality of TEI, it should be stated that the basic emotions and the related teaching concerns were well covered. We did not notice any areas that TEI failed to address. The participants also did not inform us of any missing points. However, the addition of an open-ended section to the survey might contribute to the improvement of TEI. In terms of the limitations of the present study,

first of all, we need to acknowledge that this study is limited to 564 in-service teachers in Turkish teaching context. Further studies may deal with a different number of participants in different contexts. Moreover, this study adopted a quantitative research method but the future studies may adopt a qualitative or mixed method research method to combine the complementary effect of words and numbers via an interview, survey, observation, teacher-student journals and/or diaries and questionnaires. Last but not the least, this study tested and validated a teacher emotion inventory in a different context and added a new perspective by combining teacher emotions, burnout and job satisfaction structures at the same time through a correlational study.

As maintained in the relevant previous literature, causal conclusions about the phenomenon in question together with some other variables or constructs cannot be firmly stated in cross-sectional studies (Büyükgöze-Kavas et al., 2014; Evans et al., 2019; Lohbeck et al., 2018). To make more in-depth and firm conclusions about causation and triangulate the data, longitudinal studies with various data collection tools such as questionnaires, observations, diaries, journals and interviews might be done in the future adopting structural equation modelling (SEM) or path analysis.

## CRediT authorship contribution statement

**Çağla Atmaca:** Conceptualization, Investigation, Data curation, Writing - original draft, Writing - review & editing, Supervision, Project administration. **Filiz Rızaoğlu:** Conceptualization, Methodology, Investigation, Writing - original draft, Writing - review & editing. **Turgut Türkdoğan:** Conceptualization, Methodology, Investigation, Formal analysis, Writing - review & editing, Visualization. **Demet Yaylı:** Conceptualization, Investigation, Writing - review & editing, Supervision, Project administration.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.tate.2020.103025.

## References

Afshar, H. S., & Doosti, M. (2016). An investigation into factors contributing to Iranian secondary school English teachers' job satisfaction and dissatisfaction. *Research Papers in Education, 31*(3), 274—298. https://doi.org/10.1080/02671522.2015.1037335.

Akar, H., Tantekin-Erden, F., Tor, D., & Şahin, İ. T. (2010). Study on teachers' classroom management approaches and experiences. *Elementary Education Online, 9*(2), 792—806.

Aksit, N. (2007). Educational reform in Turkey. *International Journal of Educational Development, 27*, 129—137.

Argon, T. (2015). Öğretmenlerin sahip oldukları duygu durumlarını okul yöneticilerinin dikkate alıp almamalarına ilişkin görüşleri [Views of teachers regarding whether school administrators take teachers' state of emotions into consideration or not]. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi, 15*(1), 377—404.

Atmaca, Ç. (2017). A burning issue among English teachers: Reflections of in-service teachers on job satisfaction and burnout. *ELT Research Journal, 6*(1), 89—115.

Badia, G. (2018). Forty ways to survive IL instruction overload; or, how to avoid teacher burnout. *College & Undergraduate Libraries, 25*(1), 65—71. https://doi.org/10.1080/10691316.2017.1364077.

Basım, H. N., Beğenirbaş, M., & Can Yalçın, R. (2013). Effects of teacher personalities on emotional exhaustion: Mediating role of emotional labor. *Educational Sciences Theory and Practice, 13*(3), 1488—1496.

Baycan, A. (1985). *An analysis of several aspects of job satisfaction between different occupational groups (Unpublished master's thesis)*. Istanbul: Boğaziçi University.

Becker, E. S. (2011). *Teachers' emotions in the classroom and how they relate to emotional exhaustion: An experience-sampling analysis (unpublished doctoral dissertation)*. Konstanz, Germany: The University of Konstanz.

Becker, E. S., Goetz, T., Morger, V., & Ranellucci, J. (2014). The importance of teachers' emotions and instructional behavior for their students' emotions: An experience sampling analysis. *Teaching and Teacher Education, 43*, 15—26.

Becker, E. S., Keller, M. M., Goetz, T., Frenzel, A. C., & Taxer, J. L. (2015). Antecedents

of teachers' emotions in the classroom: An intraindividual approach. *Frontiers in Psychology, 6*, 1–12. https://doi.org/10.3389/fpsyg.2015.00635.

Bloomfield, D. (2010). Emotions and 'getting by': A pre-service teacher navigating professional experience. *Asia-Pacific Journal of Teacher Education, 38*(3), 221–234. https://doi.org/10.1080/1359866X.2010.494005.

Britzman, D. P. (2007). Teacher education as uneven development: Toward a psychology of uncertainty. *International Journal of Leadership in Education, 10*(1), 1–12.

Brouwers, A., & Tomic, W. (2000). A longitudinal study of teacher burnout and perceived self-efficacy in classroom management. *Teaching and Teacher Education, 16*(2), 239–253.

Büyükgöze-Kavas, A., Duffy, R. D., Güneri, O. Y., & Autin, K. L. (2014). Job satisfaction among Turkish teachers: Exploring differences by school level. *Journal of Career Assessment, 22*(2), 261–273. https://doi.org/10.1177/1069072713493980.

Carson, R. L., Weiss, H. M., & Templin, T. J. (2010). Ecological momentary assessment: A research method for studying the daily lives of teachers. *International Journal of Research and Method in Education, 33*(2), 165–182. https://doi.org/10.1080/1743727X.2010.484548.

Catt, S., Miller, D., & Schallenkamp, K. (2007). You are the key: Communicate for learning effectiveness. *Education, 127*, 369–377.

Cerit, Y. (2009). The effects of servant leadership behaviours of school principals on teachers' job satisfaction. *Educational Management Administration & Leadership, 37*(5), 600–623. https://doi.org/10.1177/1741143209339650.

Chan, D. W. (2006). Emotional intelligence and components of burnout among Chinese secondary school teachers in Hong Kong. *Teaching and Teacher Education, 22*(8), 1042–1054.

Chan, D. W. (2008). Emotional intelligence, self-efficacy, and coping among Chinese prospective and in-service teachers in Hong Kong. *Educational Psychology, 28*, 397–408.

Chang, M. L. (2009). An appraisal perspective of teacher burnout: Examining the emotional work of teachers. *Educational Psychology Review, 2*, 193–218.

Chang, M. L. (2013). Toward a theoretical model to understand teacher emotions and teacher burnout in the context of student misbehavior: Appraisal, regulation and coping. *Motivation and Emotion, 37*, 799–817.

Chen, J. (2016). Understanding teacher emotions: The development of a teacher emotion. *Teaching and Teacher Education, 55*, 68–77.

Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed methods research designs. In A. Tashakkori, & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 209–240). California: Sage.

Cross, D. I., & Hong, J. Y. (2012). An ecological examination of teachers' emotions in the school context. *Teaching and Teacher Education, 28*(7), 957–967.

Darby, A. (2008). Teachers 'emotions in the reconstruction of professional self-understanding. *Teaching and Teacher Education, 24*(5), 1160–1172.

Dörnyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative and mixed methodologies*. New York: Oxford University Press.

Dresel, M., & Hall, N. C. (2013). Motivation. In N. C. Hall, & T. Goetz (Eds.), *Emotion, motivation, and self-regulation. A handbook for teachers* (1st ed., pp. 57–122). UK: Emerald.

Duman, G., Kural Baykan, A., Köroğlu, G. N., Yılmaz, S., & Erdoğan, M. (2014). An investigation of prospective teachers' attitudes toward educational reforms in Turkey. *Educational Sciences: Theory and Practice, 14*(2), 622–628. https://doi.org/10.12738/estp.2014.2.1708.

Elmas, R., Öztürk, N., Irmak, M., & Cobern, W. W. (2014). An investigation of teacher response to national science curriculum reforms in Turkey. *Eurasian Journal of Physics and Chemistry Education, 6*(1), 2–33.

Evans, D., Butterworth, R., & Law, G. U. (2019). Understanding associations between perceptions of student behaviour, conflict representations in the teacher-student relationship and teachers' emotional experiences. *Teaching and Teacher Education, 82*, 55–68.

Fiorilli, C., Albanese, O., Gabola, P., & Pepe, A. (2017). Teachers' emotional competence and social support: Assessing the mediating role of teacher burnout. *Scandinavian Journal of Educational Research, 61*(2), 127–138. https://doi.org/10.1080/00313831.2015.1119722.

Frenzel, A. C. (2014). Teacher emotions. In E. A. Linnenbrink-Garcia, & R. Pekrun (Eds.), *International handbook of emotions in education* (pp. 494–519). New York: Routledge.

Frenzel, A. C., Goetz, T., Lüdtke, O., Pekrun, R., & Sutton, R. (2009). Emotional transmission in the classroom: Exploring the relationship between teacher and student enjoyment. *Journal of Educational Psychology, 101*, 705–716.

Frenzel, A. C., & Stephens, E. J. (2013). Emotions. In N. C. Hall, & T. G. Emotion (Eds.), *motivation, and self-regulation: a handbook for teachers* (pp. 1–56). Bingley: Emerald.

Frenzel, A. C., Becker-Kurz, B., Pekrun, R., & Goetz, T. (2015). Teaching this class drives me nuts! - examining the person and context specificity of teacher emotions. *PLoS One, 10*(6), 1–15. https://doi.org/10.1371/journal.pone.0129630.

Freudenberger, H. J. (1974). Staff burn-out. *Journal of Social Issues, 30*, 159–165.

Friedman, I. A. (2003). Self-efficacy and burnout in teaching: The importance of interpersonal-relations efficacy. *Social Psychology of Education, 6*(3), 191–215.

Frisby, B. N., & Martin, M. M. (2010). Instructor–student and student–student rapport in the classroom. *Communication Education, 59*(2), 146–164. https://doi.org/10.1080/03634520903564362.

Gardner, L., & Stough, C. (2002). Examining the relationship between leadership and emotional intelligence in senior level managers. *The Leadership & Organization Development Journal, 23*, 68–78.

Golombek, P. R., & Doran, M. (2014). Unifying cognition, emotion, and activity in language teacher professional development. *Teaching and Teacher Education, 39*, 102–111.

Grayson, J. L., & Alvarez, H. K. (2008). School climate factors relating to teacher burnout: A mediator model. *Teaching and Teacher Education, 24*, 1349–1363.

Global Teacher Status Index. (2013). *Varkey GEMS foundation*. UK http://sro.sussex.ac.uk/63812/1/2013%2BGlobal%2BTeacher%2BStatus%2BIndex%2Bl.pdf.

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*(2), 348–362.

Hagenauer, G., Hascher, T., & Volet, S. E. (2015). Teacher emotions in the classroom: Associations with students' engagement, classroom discipline and the interpersonal teacher-student relationship. *European Journal of Psychology of Education, 30*(4), 385–403.

Hair, J. F., Jr., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective* (7th ed.). California: Pearson Education.

Hargreaves, A. (2000). Mixed emotions: Teachers' perceptions of their interactions with students. *Teaching and Teacher Education, 16*, 811–826.

Hargreaves, A. (2005). The emotions of teaching and educational change. In A. Hargreaves (Ed.), *Extending educational change*. Dordrecht: Springer.

Hochschild, A. R. (2003). *The managed heart: Commercialization of human feeling* (2nd ed.). Berkeley, CA: University of California Press.

Hosotani, R., & Imai-Matsumura, K. (2011). Emotional experience, expression, and regulation of high-quality Japanese elementary school teachers. *Teaching and Teacher Education, 27*, 1039–1048.

Hurren, B. L. (2006). The effects of principals' humor on teachers' job satisfaction. *Educational Studies, 32*(4), 373–385. https://doi.org/10.1080/03055690600850321.

İnce, N. B., & Şahin, A. E. (2015). The adaptation study of Maslach burnout inventory-educators survey to Turkish. *Journal of Measurement and Evaluation in Education and Psychology, 6*(2), 385–399.

Jenkins, K. A., Charteris, J., Bannister-Tyrrell, M., & Jones, M. (2017). Emotions and casual teachers: Implications of the precariat for initial teacher education. *Australian Journal of Teacher Education, 42*(12), 162–179.

Jorgenson, J. (1992). Social approaches: Communication, rapport, and the interview: A social perspective. *Communication Theory, 2*, 148–156.

Justice, M., & Espinoza, S. (2007). Emotional intelligence and beginning teacher candidates. *Education, 127*(4), 456–461.

Kalman, M., & Bozbayındır, F. (2017). An investigation of dispositional resistance, change-specific resistance and change-related information: The case of the "4+4+4" educational reform in Turkey. *Multidisciplinary Journal of Educational Research, 7*(2), 125–155.

Karlsson, M. (2013). Emotional identification with teacher identities in student teachers' narrative interaction. *European Journal of Teacher Education, 36*(2), 133–146. https://doi.org/10.1080/02619768.2012.686994.

Khani, R., & Mirzaee, A. (2015). How do self-efficacy, contextual variables and stressors affect teacher burnout in an EFL context? *Educational Psychology, 35*(1), 93–109. https://doi.org/10.1080/01443410.2014.981510.

Kırılmaz, A. Y., Çelen, Ü., & Sarp, N. (2003). İlköğretim'de çalışan bir öğretmen grubunda "tükenmişlik araştırması" [A study on "burnout" with a group of primary school teachers]. *Ilköğretim Online, 2*(1), 2–9.

Kırkgöz, Y. (2008). A case study of teachers' implementation of curriculum innovation in English language teaching in Turkish primary education. *Teaching and Teacher Education, 24*, 1859–1875.

Kırkgöz, Y. (2009). Globalization and English language policy in Turkey. *Educational Policy, 23*(5), 663–684. https://doi.org/10.1177/0895904808316319.

Kısaç, İ. (2009). Anger provoking reasons on high school and university students. *Procedia - Social and Behavioral Sciences, 1*(1), 2202–2206.

Klassen, R. M., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of Educational Psychology, 102*(3), 741–756. https://doi.org/10.1037/a0019237.

Korkmaz, M. (2005). Effects of leadership styles and emotions on teachers 'performance. *Educational Administration: Theory and Practice, 43*, 401–422.

Koşar-Altınyelken, H. (2012). A converging pedagogy in the developing world? Insights from Uganda and Turkey. In A. Verger, M. Novelli, & H. Kosar Altinyelken (Eds.), *Global education policy and international development: New agendas, issues and policies* (pp. 201–221). London: Bloomsbury.

Kotaman, H. (2016). Turkish prospective early childhood teachers' emotional intelligence level and its relationship to their parents' parenting styles. *Teacher Development, 20*(1), 106–122.

Krashen, S. (1982). *Principles and practice in second language acquisition* (1st ed.). Oxford: Pergamon Press.

Kunter, M., Frenzel, A. C., Nagy, G., Baumert, J., & Pekrun, R. (2011). Teacher enthusiasm: Dimensionality and context specificity. *Contemporary Educational Psychology, 36*(4), 289–301.

Kunter, M., Tsai, Y. M., Klusmann, U., Brunner, M., Krauss, S., & Baumert, J. (2008). Students' and mathematics teachers' perceptions of teacher enthusiasm and instruction. *Learning and Instruction, 18*(4), 68–482.

Lee, J. C., Huang, Y. X., Law, E. H., & Wang, M. (2013). Professional identities and emotions of teachers in the context of curriculum reform: A Chinese perspective. *Asia-Pacific Journal of Teacher Education, 41*(3), 271–287. https://doi.org/10.1080/1359866X.2013.809052.

Liu, X. S., & Ramsey, J. (2008). Teachers' job satisfaction: Analyses of the teacher follow-up survey in the United States for 2000-2001. *Teaching and Teacher Education, 24*, 1173–1184.

Lohbeck, A., Hagenauer, G., & Frenzel, A. C. (2018). Teachers' self-concepts and emotions: Conceptualization and relations. *Teaching and Teacher Education, 70*, 111—120.

Lozano, R., & Kızılaslan, İ. (2013). Approaches to classroom discipline in Turkey and their implications for teacher education. *International Journal on New Trends in Education and Their Implications, 4*(1), 180—187.

Madrid, S., Baldwin, N., & Frye, E. (2013). "Professional feeling": One early childhood educator's emotional discomfort as a teacher and learner. *Journal of Early Childhood Research, 11*(3), 274—291. https://doi.org/10.1177/1476718X13484240.

Maneesriwongul, W., & Dixon, J. K. (2004). Instrument translation process: A methods review. *Journal of Advanced Nursing, 48*(2), 175—186.

Mann, C. J. (2003). Observational research methods. Research design II: Cohort, cross sectional, and case-control studies. *Emergency Medicine Journal, 20*(1), 54—60.

Maslach, C. (1982). *Burnout: The cost of caring*. Englewood Cliffs, NJ: Prentice Hall.

Maslach, C., Jackson, S. E., & Schwab, R. L. (1996). Maslach burnout inventory-educators survey (MBI-ES). In C. Maslach, S. E. Jackson, & M. P. Leiter (Eds.), *MBI Manual* (3rd). Palo Alto, CA: Consulting Psychologists Press.

Maxwell, A., & Riley, P. (2016). Emotional demands, emotional labour and occupational outcomes in school principals: Modelling the relationships. *Educational Management Administration & Leadership, 45*(3), 484—502. https://doi.org/10.1177/1741143215607878.

Montgomery, C., & Rupp, A. A. (2005). A meta-analysis for exploring the diverse causes and effects of stress in teachers. *Canadian Journal of Education, 28*, 458—486.

Paegelow, R. S. (2008). Back translation revisited: Differences that matter (and those that do not). *ATA Chronicle*, (8), 22—25.

Penrose, A., Perry, C., & Ball, I. (2007). Emotional intelligence and teacher self-efficacy: The contribution of teacher status and length of experience. *Issues in Educational Research, 17*(1), 107—126.

Richardson, P. W., & Watt, H. M. G. (2010). Current and future directions in teacher motivation research. In T. C. Urdan, & S. A. Karabenick (Eds.), *Advances in motivation and achievement: ume 16B. The decade ahead: Applications and contexts of motivation and achievement* (pp. 139—173). Bingley: Emerald.

Samancıoğlu, M., Bağlıbel, M., Bozbayındır, F., & Kalman, M. (2015). Educational leaders' and teachers' opinions about changes in the Turkish education system: A qualitative case study. *International Journal of Leadership and Change, 3*(1), 41—50.

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.

Scott, C., Stone, B., & Dinham, S. (2001). I Love Teaching but…. international patterns of teacher discontent. *Education Policy Analysis Archives, 9*, 1—7.

SEGE. (2011). *T.C. Kalkınma Bakanlığı, İllerin ve Bölgelerin Sosyo-ekonomik Gelişmişlik Sıralaması Araştırması [Republic of Turkey, Social and economic development index of cities and regions]*.

Shapiro, S. (2010). Revisiting the teachers' lounge: Reflections on emotional experience and teacher identity. *Teaching and Teacher Education, 26*, 616—621.

Scherer, K. R., Wranik, T., Sangsue, J., Tran, V., & Scherer, U. (2004). Emotions in everyday life: Probability of occurrence, risk factors, appraisal and reaction patterns. *Social Science Information, 43*(4), 499—570.

Skaalvik, E. M., & Skaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective teacher efficacy, and teacher burnout. *Journal of Educational Psychology, 99*, 611—625.

Skaalvik, E. M., & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education, 26*(4), 1059—1069.

Skaalvik, E. M., & Skaalvik, S. (2011). Teacher job satisfaction and motivation to leave the teaching profession: Relations with school context, feeling of belonging, and emotional exhaustion. *Teaching and Teacher Education, 27*, 1029—1038.

Stough, C., Saklofske, D. H., & Parker, J. D. A. (2009). *Assessing emotional intelligence: Theory, research, and application*. New York: Springer.

Stride, C., Wall, T. D., & Catley, N. (2007). *Measures of job satisfaction, organisational commitment, mental health and job-related well-being: A benchmarking manual* (2nd ed.). New York, NY: John Wiley.

Sutton, R. E., & Wheatley, K. F. (2003). Teachers' emotions and teaching: A review of the literature and directions for future research. *Educational Psychology Review, 15*(4), 327—358.

Swan, P., & Riley, P. (2015). Social connection: Empathy and mentalization for teachers. *Pastoral Care in Education, 33*(4), 220—233. https://doi.org/10.1080/02643944.2015.1094120. Retrieved on 30.05.2019 from.

Tabachnick, B. G., & Fidell, L. S. (1996). *Using multivariate statistics* (3rd ed.). New York: Harper Collins College Publishers.

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.

Timoštšuk, I., & Ugaste, A. (2012). The role of emotions in student teachers' professional identity. *European Journal of Teacher Education, 35*(4), 421—433. https://doi.org/10.1080/02619768.2012.662637.

TÜİK. (2019). *Ulusal Eğitim İstatistikleri Veritabanı [national education statistics database]*.

Uitto, M., Jokikokko, K., & Estola, E. (2015). Virtual special issue on teachers and emotions in *Teaching and Teacher education (TATE)* in 1985-2014. *Teaching and Teacher Education, 50*, 124—135.

Valiente, C., Swanson, J., & Eisenberg, N. (2012). Linking students' emotions and academic achievement: When and why emotions matter. *Child Development Perspectives, 6*(2), 129—135. https://doi.org/10.1111/j.1750-8606.2011.00192.x.

Vandenberghe, R., & Huberman, A. M. (1999). *Understanding and preventing teacher burnout: A sourcebook of international research and practice*. Cambridge: Cambridge University Press.

Watt, H. M. G., & Richardson, P. W. (2007). Motivational factors influencing teaching as a career choice: Development and validation of the FIT-Choice Scale. *The Journal of Experimental Education, 75*(3), 167—202.

Watt, H. M. G., & Richardson, P. W. (2008). Guest editorial: Motivation for teaching. *Learning and Instruction, 18*(5), 405—407.

Weiner, B. (2007). Examining emotional diversity in the classroom: An attribution theorist considers the moral emotions. In P. A. Schutz, & R. Pekrun (Eds.), *Emotions in education* (pp. 75—88). San Diego: Academic Press.

Weiss, D. J., Dawis, R. V., England, G. W., & Lofquist, L. H. (1967). *Manual for the Minnesota satisfaction questionnaire*. Minneapolis, MN: University of Minnesota Industrial Relations Center.

Wurf, G., & Croft-Piggin, L. (2015). Predicting the academic achievement of first-year, pre-service teachers: The role of engagement, motivation, ATAR, and emotional intelligence. *Asia-Pacific Journal of Teacher Education, 43*(1), 75—91.

Yılmaz, K., Altınkurt, Y., Guner, M., & Sen, B. (2015). The relationship between teachers' emotional labor and burnout level. *Eurasian Journal of Educational Research, 59*, 75—90.

Yöndem, Z. D., & Bıçak, B. (2008). Öğretmen adaylarının öfke düzeyi ve öfke tarzları [Anger levels and anger styles of the teacher candidates]. *Uluslararası İnsani Bilimler Dergisi, 5*(2), 1—15.

Zhang, Q., & Zhu, W. (2008). Exploring emotion in teaching: Emotional labor, burnout, and satisfaction in Chinese higher education. *Communication Education, 57*(1), 105—122. https://doi.org/10.1080/03634520701586310.

Zembylas, M. (2013). The place of emotion in teacher reflection: Elias, Foucault and 'critical emotional Reflexivity. *Power and Education, 6*(2), 210—222.

Zembylas, M., & Papanastasiou, E. (2004). Job satisfaction among school teachers in Cyprus. *Journal of Educational Administration, 42*, 357—374.