



# The job and life satisfaction of teachers: a social cognitive model integrating teachers' burnout, self-efficacy, dispositional optimism, and social support

Jenny Marcionetti<sup>1</sup> · Luciana Castelli<sup>1</sup>

Received: 19 January 2021 / Accepted: 31 October 2021 / Published online: 6 January 2022  
© The Author(s) 2022

## Abstract

The purpose of the study was to test a model of factors predicting teachers' job and life satisfaction, burnout, dispositional optimism, social support, perceived workload, and self-efficacy. The model extends Lent and Brown's (J Voc Behav 69(2):236–247, <https://doi.org/10.1016/j.jvb.2006.02.006>, 2006; J Career Assess 16(1):6–21, <https://doi.org/10.1177/1069072707305769>, 2008) social cognitive model of the interaction of sources of job and life satisfaction. Specifically, burnout, a condition with a high incidence rate among teachers, was included. The participants were 676 Swiss teachers. Structural equation modeling was used to analyze the data. The results revealed the differential effect of the variables considered on teachers' burnout and job satisfaction, as well as their life satisfaction. Dispositional optimism, social support, and perceived workload might reduce the risk of teacher burnout; dispositional optimism, social support, and teacher self-efficacy seem to positively affect job satisfaction; and dispositional optimism alone, together with burnout and job satisfaction, directly relates to teachers' life satisfaction. Practical implications of these results are discussed.

**Keywords** Teachers · Job satisfaction · Life satisfaction

## Résumé

**La satisfaction de travail et de vie des enseignantes: un modèle sociocognitif intégrant le burnout, l'auto-efficacité, l'optimisme dispositionnel et le soutien social des enseignant·e·s** L'objectif de cette étude était de tester un modèle de facteurs prédisant la satisfaction au travail et de vie, l'épuisement professionnel, l'optimisme dispositionnel, le soutien social, la charge de travail perçue et l'auto-efficacité des enseignant·e·s. Le modèle étend le modèle sociocognitif de Lent et Brown (2006; 2008) de l'interaction des sources de satisfaction de travail et de vie. En particulier,

---

✉ Jenny Marcionetti  
jenny.marcionetti@supsi.ch

<sup>1</sup> Department of Education and Learning (DFA), University of Applied Sciences and Arts of Southern Switzerland (SUPSI), Piazza San Francesco 19, 6600 Locarno, Switzerland

il inclut l'épuisement professionnel, une condition dont le taux d'incidence est élevé chez les enseignant-e-s. Les participants étaient 676 enseignant-e-s suisses. La modélisation par équations structurelles a été utilisée pour analyser les données. Les résultats ont révélé l'effet différentiel des variables considérées sur le burnout et sur la satisfaction professionnelle des enseignant-e-s, ainsi que sur leur satisfaction de vie. L'optimisme dispositionnel, le soutien social et la charge de travail perçue peuvent réduire le risque d'épuisement professionnel des enseignant-e-s; l'optimisme dispositionnel, le soutien social et l'auto-efficacité des enseignant-e-s semblent affecter positivement la satisfaction de travail. L'optimisme dispositionnel seul, conjointement à l'épuisement professionnel et à la satisfaction de travail, est directement associé à la satisfaction de vie des enseignant-e-s. Les implications pratiques de ces résultats sont discutées.

### **Zusammenfassung**

**Ziel der Studie war es, ein Modell von Faktoren zu testen, die die Arbeits- und Lebenszufriedenheit von Lehrkräften, Burnout, dispositionellen Optimismus, soziale Unterstützung, wahrgenommene Arbeitsbelastung und Selbstwirksamkeit erklären.** Das Modell erweitert das sozial-kognitive Modell von Lent und Brown (2006; 2008) über die Interaktion von Quellen der Arbeits- und Lebenszufriedenheit. Insbesondere wurde Burnout, ein Zustand, der unter Lehrkräften sehr häufig vorkommt, einbezogen. Die Teilnehmenden waren 676 Schweizer Lehrkräfte. Die Daten wurden mit Hilfe von Strukturgleichungsmodellen analysiert. Die Ergebnisse zeigten, dass die untersuchten Variablen einen unterschiedlichen Einfluss auf Burnout und Arbeitszufriedenheit sowie auf die Lebenszufriedenheit von Lehrkräften haben. Dispositioneller Optimismus, soziale Unterstützung und wahrgenommene Arbeitsbelastung könnten das Burnout-Risiko von Lehrkräften verringern; dispositioneller Optimismus, soziale Unterstützung und Selbstwirksamkeit von Lehrkräften scheinen sich positiv auf die Arbeitszufriedenheit auszuwirken; und dispositioneller Optimismus allein, zusammen mit Burnout und Arbeitszufriedenheit, steht in direktem Zusammenhang mit der Lebenszufriedenheit von Lehrkräften. Die Implikationen der Ergebnisse für die Praxis werden diskutiert.

### **Resumen**

**El trabajo y la satisfacción con la vida de los maestros: un modelo cognitivo social que integra el agotamiento, la autoeficacia, el optimismo disposicional y el apoyo social de los maestros.** El propósito del estudio fue probar un modelo de factores que predicen el trabajo, satisfacción vital, agotamiento, optimismo disposicional, apoyo social, carga de trabajo percibida y autoeficacia de los maestros. El modelo amplía el modelo cognitivo social de Lent y Brown (2006; 2008) de la interacción de las fuentes de satisfacción laboral y vital. Específicamente, se incluyó el burnout, una condición con una alta tasa de incidencia entre los docentes. Los participantes fueron 676 profesores suizos. Se utilizó un modelo de ecuaciones estructurales para analizar los datos. Los resultados revelaron el efecto diferencial de las variables consideradas sobre el desgaste y la satisfacción laboral de los docentes, así como su satisfacción con la vida. El optimismo disposicional, el apoyo social y la

carga de trabajo percibida pueden reducir el riesgo de agotamiento de los docentes; el optimismo disposicional, el apoyo social y la autoeficacia de los profesores parecen afectar positivamente la satisfacción laboral; y el optimismo disposicional por sí solo, junto con el agotamiento y la satisfacción laboral, se relaciona directamente con la satisfacción con la vida de los profesores. Se discuten las implicaciones prácticas de estos resultados.

## Introduction

Teachers' job and life satisfaction (Caprara et al., 2006; Lent et al., 2011), as well as teachers' stress and burnout (Schwarzer & Hallum, 2008; Skaalvik & Skaalvik, 2016), have been the focus of a growing number of studies in recent years. Lent and Brown (2006, 2008) developed a multifactorial model that explains job satisfaction starting from their social cognitive career theory (Lent et al., 1994). This social cognitive model of job satisfaction (SCM-JS) integrates personality/affective traits, participation in/progress at goal-directed activities, work-related self-efficacy, perceived work conditions and outcome expectations, and goal- and efficacy-relevant environmental supports or obstacles and clarifies how these factors relate and contribute to explaining job satisfaction and life satisfaction. In particular, according to Lent and Brown's (2006, 2008) SCM-JS, job satisfaction is influenced by goal-directed activity, self-efficacy, work conditions and outcomes, goal- and efficacy-relevant environmental supports and obstacles, and personality and affective traits. Job satisfaction is also assumed to impact global life satisfaction.

In the past, a large number of studies have been devoted to the study of teachers' burnout and its association with internalizing and externalizing behaviors (Maslach et al., 2001; Melamed et al., 2006). While teachers' job satisfaction can be seen as a positive indicator of teachers' well-being, burnout is undoubtedly a negative indicator of teachers' well-being. Multifactorial studies on teachers' well-being, which consider different personal and contextual variables as predictors of both burnout and job and life satisfaction, are lacking. Hence, our aim was to describe the relation between teachers' dispositional optimism, perception of social support, self-efficacy, perceived workload, burnout, and job and life satisfaction by testing a model based on the Lent and Brown (2006, 2008) SCM-JS. We also wanted to verify that the model was invariant between female and male teachers.

## Life and job satisfaction

According to Diener (1984), life satisfaction is the judgment that individuals give about their well-being and quality of life based on personal criteria. A large body of studies has demonstrated that life satisfaction is associated with different positive personal, psychological, and social outcomes (DeNeve & Cooper, 1998; Diener & Tay, 2012; Pavot & Diener, 1993). Some longitudinal studies have suggested that life satisfaction not only is influenced by but also influences these positive outcomes. Indeed, higher life satisfaction seems to predict higher income (De Neve & Oswald,

2012), greater job success (Boehm & Lyubomirsky, 2008; Luhmann et al., 2013), better relationships (Oishi et al., 2007), a higher likelihood of marriage and childbirth and a lower likelihood of marital separation and relocation (Luhmann et al., 2013), fewer health problems, and greater longevity (Diener & Chan, 2011). Even if the processes underlying these associations are still unclear, studies seem to indicate that life satisfaction drives people toward the adoption of personal goals and hence a higher level of control over their life circumstances (Luhmann & Hennecke, 2017). Thus, life satisfaction is an important indicator of present well-being and might be seen as a resource for future well-being.

Job satisfaction is an important factor to consider when studying workers' desirable outcomes and well-being. Job satisfaction is defined as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976, p. 1300) or, more briefly, "the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs" (Spector, 1997, p. 2). Studies have indicated that job satisfaction is influenced by characteristics of the work environment (Fairbrother & Warn, 2003) and individual dispositions such as personality traits (Steel et al., 2019). Specifically, with regard to teachers, self-regulation processes such as perceived self-efficacy (Caprara et al., 2006) have been found to predict job satisfaction, which in turn influences teachers' retention (Ingersoll, 2001) and relations to students (Veldman et al., 2013).

The only study that tested the whole SCM-JS on teachers found that life satisfaction is predicted by positive affect and goal-directed activity, and job satisfaction is predicted by positive affect, efficacy support, and work conditions but is not related to self-efficacy or goal-directed activity (Lent et al., 2011). In this study, job satisfaction influenced life satisfaction. However, as also reported by Lent and Brown (2008), studies suggest that the link between these two variables might be bidirectional (Schmitt & Pulakos, 1985) and that the path from life satisfaction to job satisfaction may be the strongest (Bialowolski & Weziak-Bialowolska, 2020; Bowling et al., 2010; Unanue et al., 2017).

## Burnout

Burnout can be defined as a state of exhaustion, i.e., physical, emotional, and mental (Kristensen et al., 2005), which derives from being exposed to a strongly demanding work environment (Schaufeli & Greenglass, 2001, p. 501). Burnout occurs only in the work domain and is a result of chronic stress (Milfont et al., 2008). Given its association with several negative conditions and behaviors, such as depression, anxiety, substance abuse, decreased performance, and increased health problems (Maslach et al., 2001; Melamed et al., 2006), burnout has been recognized to be a serious problem for individuals, organizations, and society (Schaufeli et al., 2009). Among teachers, compared to other professional categories, several studies have found higher levels of emotional exhaustion (Schaufeli & Enzmann, 1998), as well as a higher incidence rate of psychiatric disorders (Lodolo D'Oria et al., 2004). Previous studies have provided several examples of factors related to teacher burnout, such as feelings of isolation and lack of support from colleagues, perceived work

overload, role ambiguity or role conflict, lack of autonomy, and problems with classroom management and discipline (Alarcon, 2011; Avanzi et al., 2018; Grayson & Alvarez, 2008; Yildirim, 2008). Some studies have also demonstrated a negative association between life satisfaction and burnout (David & Quintao, 2012; Hayes & Weathington, 2007). Demerouti et al. (2000) showed that burnout has a mediating effect between job demands or resources and life satisfaction. Hakanen and Schaufeli (2012) specified that burnout could predict depressive symptoms and life dissatisfaction but not vice versa. Evidence of a relation with job satisfaction has also been found in salespersons (Rutherford et al., 2011; Singh et al., 1994), while few studies have been conducted among teachers (Skaalvik & Skaalvik, 2009). Finally, previous studies have highlighted that social support might serve as a coping strategy to adapt to a stressful working environment (Halbesleben, 2006; Viswesvaran et al., 1999) and a useful resource to contrast a condition of perceived workload and burnout (Maslach et al., 2001).

## Dispositional optimism

Dispositional optimism is the expectation that one's own outcomes will generally be positive. Conversely, pessimism is the expectation of negative outcomes. This cognitive construct influences motivation (Carver & Scheier, 2014), whereas optimistic people have the tendency to exert effort, pessimistic people disengage from it. Previous literature has confirmed that optimists are more successful in work environments (Seligman & Schulman, 1986), manage difficult situations more effectively (Wrosch & Scheier, 2003), better balance effort expenditures (Segerstrom, 2006), have better social relationships (Neff & Geers, 2013; Srivastava et al., 2006) and health (Kim et al., 2011), and are less depressed (Schweizer, et al., 1999) than pessimists. Indeed, dispositional optimism has been found to be positively associated with life satisfaction (Harju & Bolen, 1998; Malinauskas & Vaicekouskas, 2013; Reed, 2016), self-efficacy and perceived social support (Karademas, 2006) and negatively associated with perceived workload (Gardner & Parkinson, 2011; Reed, 2016) and burnout (Hayes & Weathington, 2007). These findings are consistent with the SCM-JS, which assumes that personality and affective traits are linked to job and life satisfaction both directly and indirectly through several cognitive, affective, behavioral, and social paths.

## Social support

Social support is “the availability of helping relationships and the quality of those relationships” (Leavy, 1983, p. 5). Johnson and Hall (1988) thought social support to be highly important to explain job strain; hence, they expanded the job demand-control model of job strain (Karasek, 1979) to integrate this factor. According to the literature, social support may modify the impact of psychological demands, both in (Viswesvaran et al., 1999) and out of the work context (Cobb, 1976). Indeed, research has connected perceived social support negatively with burnout (Prins

et al., 2007) and positively with measures of subjective well-being (Siedlecki et al., 2013) and optimism (Karademas, 2006). Studies conducted on teachers have shown that interpersonal relationships play a key role in teachers' work (Van Droogenbroeck et al., 2014) and that positive and satisfying relationships with colleagues, parents, and students moderate burnout (Cano-García et al., 2005; Doudin et al., 2011; Gavish & Friedman, 2010). Specifically, in studies based on the three-dimensional conceptualization of burnout, which includes emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach & Jackson, 1986), work-related sources of support, i.e., those coming from professional figures such as colleagues and superiors, because they directly affect job demand perception, strongly relate to the exhaustion dimension of burnout (Betoret, 2006; Halbesleben, 2006). Coherently with these results, in the SCM-JS, social support directly influences self-efficacy, work condition perceptions, and job satisfaction (and burnout) and is influenced by personality traits.

### **Perceived workload**

According to the models by Karasek (1979, 1998; job demand-control) and Demerouti et al., (2001; job demands-resources), which define job strain as a consequence of the discrepancy between job demands and the autonomy or control over the job or the resources that are available to individuals to face those demands, respectively, perceived workload might be a relevant factor that influences well-being. There are indeed many studies confirming an association between workload and, respectively, emotional exhaustion and burnout (Alarcon, 2011; Kokkinos, 2007). Instead, unlike links theorized in SCM-JS, the results of a regression analysis performed in a recent meta-analysis investigating factors associated with and consequences of workload, led the authors to conclude that workload did not have a relation with job satisfaction after controlling for the effects of role ambiguity and role overload (Bowling et al., 2015). In the same meta-analytic study, the authors found that workload was negatively associated with social support, both from supervisors and coworkers, and positively associated with the negative affectivity trait. In the SCM-JS, perceived workload falls into the work conditions category. Hence, it should be predicted by social support and self-efficacy and should predict job satisfaction and burnout. Although few studies have suggested that perceived workload can directly influence life satisfaction (Goh et al., 2015), according to SCM-JS, this influence occurs indirectly through job satisfaction.

### **Teachers' self-efficacy**

According to Bandura's theory regarding the sources of self-efficacy (1997), teachers make judgments about their self-efficacy, i.e., about their own ability and skills in teaching even in unfavorable conditions, based on the perceptions of their past teaching experiences, the failures or successes of their fellow teachers that serve as vicarious experiences, the verbal incentive present in their work environment, such

as that from colleagues and principals, the physiological state related to the emotions and the level of excitement experienced in teaching practice. Thus, together with personal mastery experience, social support, and good relationships in the working context are crucial to enhancing self-efficacy (Korte & Simonsen, 2018; Usher & Pajares, 2008). Additionally, according to Bandura (2006), self-efficacy determines how environmental opportunities and impediments are perceived. Moreover, self-efficacy influences individuals' goals and behaviors. In particular, efficacy beliefs influence the choice of activities, the effort expended on an activity, and how long the individual will persevere when facing obstacles. Consequently, people with high levels of self-efficacy beliefs are expected to put themselves in more challenging situations, which may also lead to higher success in job and life. Indeed, teachers' self-efficacy has been linked with an increased persistence in working with challenging students and has been shown to affect teachers' commitment, enthusiasm, practices, and teaching behaviors (Skaalvik & Skaalvik, 2007). Furthermore, concerning its relation with well-being variables, research has shown that self-efficacy is related to teachers' job satisfaction, stress, and burnout (Caprara et al., 2006; Klassen & Chiu, 2010; Malinen & Savolainen, 2016; Schwarzer & Hallum, 2008; Skaalvik & Skaalvik, 2016).

Consistent with the above, in the SCM-JS, self-efficacy is influenced by support and personality traits/positive affectivity and directly and positively impacts goal progress, work conditions, and job satisfaction; its effect on life satisfaction goes through job satisfaction (and burnout). Whereas the study of Duffy and Lent (2009) on US teachers confirmed the direct relation between teacher self-efficacy and job satisfaction, the study of Lent et al. (2011) on Italian teachers did not find a direct link between these variables but only an indirect link through work conditions.

## Current study

As previously mentioned, only a few studies have tested all or most of the relationships theorized in Lent and Brown's (2006, 2008) model on teachers (Duffy & Lent, 2009; Lent et al., 2011), and the results of these studies are not always consistent. From the analysis of the literature just presented, a few questions emerge for which we would like to provide some additional explanatory information with this study. First, the direction of the relation between job and life satisfaction is not clear; the findings are indeed inconsistent (e.g., Bialowolski & Weziak-Bialowolska, 2020; Bowling et al., 2010; Schmitt & Pulakos, 1985; Unanue et al., 2017). Hence, in this study, both links are tested alternatively. Second, it is unclear whether the construct of burnout specifically relates to job satisfaction and whether burnout and life satisfaction are also linked directly (David & Quintao, 2012; Hakanen & Schaufeli, 2012; Hayes & Weathington, 2007) or only indirectly through job satisfaction. Thus, in this study, these associations are explored. Third, according to literature (Gardner & Parkinson, 2011; Reed, 2016), unlike what appears in SCM-JS, a direct relationship between optimism and perceived workload can be hypothesized. Hence, this link is tested in this study. Fourth, the relationship between perceived workload and life satisfaction is not clear whether it is direct (Goh et al., 2015) or mediated by job

satisfaction, as stated in the Lent and Brown (2006, 2008) model, but not supported by Bowling et al. (2015). Finally, although partially related to the fourth research gap, the link between teacher self-efficacy and job satisfaction is also unclear, particularly whether it is direct (Duffy & Lent, 2009) or partially/fully mediated by perceived workload (work conditions) (Lent et al., 2011). Hence, these mediation pathways are also tested in this study.

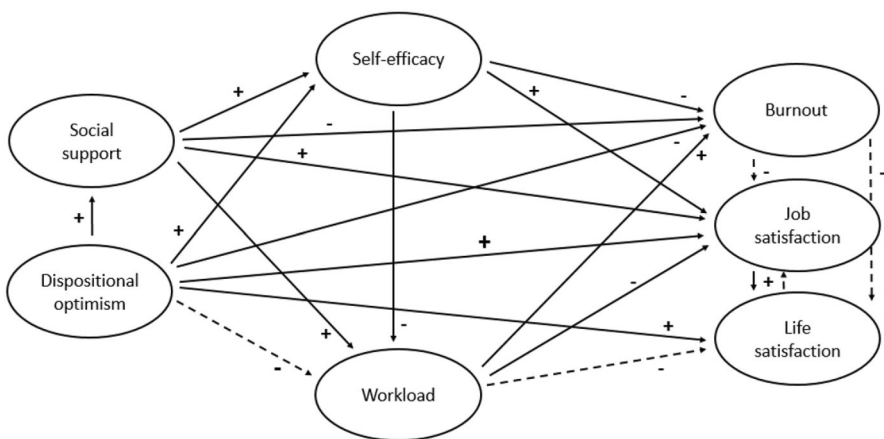
In the model that we wanted to test with this study, burnout was considered an indicator of occupational well-being as job satisfaction; thus, it was set as directly predicted by self-efficacy, support from colleagues, dispositional optimism, and workload. With respect to the other relationships, we adhered to the Lent and Brown (2006, 2008) SCM-JS. The links hypothesized are summarized in Figure 1.

## Method

### Participants and procedure

The study was conducted in the Swiss state of the canton of Ticino, in the southern region of Switzerland. Teachers working in Ticino undergo professional training that lasts for 2 or 3 years, which is equivalent to a bachelor's or master's degree, depending on the school sector for which they are qualified. For the working environment, primary, lower secondary, upper secondary, and vocational schoolteachers generally work in school institutes with a school principal, administration staff, and several colleagues, while preprimary schoolteachers generally work in small school sites with only a few colleagues and report to a school principal often working elsewhere.

The participants were teachers from 24 public school institutes of primary, secondary, and vocational schools, conveniently selected over the Ticino territory and



**Figure 1** A model to predict teacher well-being based on Lent and Brown (2006, 2008) model. *Note* Dotted line = links added to Lent and Brown model; + hypothesis of a positive relationship; – hypothesis of a negative relationship



identified on the basis of school sector, school size, and location criteria. Teachers were contacted through e-mail invitations, where information about the study and the guarantee of anonymity of the study were provided. Anonymous data were collected through an online questionnaire. To have access to the questionnaire, an anonymous link was sent to participants via e-mail invitations.

The data collection involved 676 teachers, which was equal to 8% of the total population of active teachers in Ticino; 375 were females (55.5%), and 301 were men (44.5%). Most of them (85.8%) had a percentage of working time equal to or above 50% of a full-time contract. The mean age was 44.53 years ( $SD=10.27$ ), and the mean school tenure was 15.7 years ( $SD=11.49$ ). Teachers participating in the study worked in preprimary and primary schools (18%), lower secondary schools (18.3%), upper secondary schools (29.3%), and vocational schools (34.3%). For the above variables, the proportions were similar to those of the reference population.

## Measures

### Life satisfaction

Global life satisfaction was measured with the Italian version of the Satisfaction with Life Scale (Di Fabio & Palazzeschi, 2012; Diener et al., 1985). The scale consists of 5 items rated on a 7-point Likert-type scale, with responses ranging from 1 (strongly disagree) to 7 (strongly agree). An example item is “In most ways my life is close to my ideal”. The Cronbach’s alpha was 0.87 for the original English scale (Diener et al., 1985) and 0.88 for the Italian scale (Di Fabio & Palazzeschi, 2012).

### Job satisfaction

To assess job satisfaction, 6 items were created ad hoc by educational psychologists based on previous job satisfaction scale items. The items are rated using a 4-point Likert-type scale, with responses ranging from 1 (“Don’t agree at all”) to 4 (“Totally agree”). Two item examples are “The work I do meets my expectations” and “I am generally satisfied with my profession”.

### Burnout

To measure burnout, we used the 5-item version of the work-burnout subscale of the Copenhagen Burnout Inventory (Kristensen et al., 2005) developed and validated in Italian by Marcionetti et al. (2018). The items are rated using a 5-point Likert-type scale, with responses ranging from 1 (“never, almost never”/ “to a low degree, to a very low degree”) to 5 (“always”/ “to a very high degree”). An example item on the work-burnout scale is “Is your work emotionally exhausting?”. The Cronbach’s alpha for the original English subscale was 0.87 for the work-burnout scale. The omega value (McDonald, 1999) of the Italian short version of the scale was 0.84.

## Optimism

Dispositional optimism was measured using the Italian version of the Revised Life Orientation Test (Giannini et al., 2008; Scheier et al., 1994). The scale consists of 6 items (plus 4 filler items) rated on a 5-point Likert-type scale, with responses ranging from 1 (“strongly disagree”) to 5 (“strongly agree”). An example item is “I’m always optimistic about my future”. The Cronbach’s alpha of the original English scale was 0.78, and 0.81 for the Italian translation.

## Social support

To measure perceived support from colleagues, the 4-item scale of Edwards et al. (2008), translated and validated in Italian by Toderi et al. (2013), was used. The items are rated on a 5-point Likert-type scale, with responses ranging from 1 (“never”) to 5 (“always”). An example item is “I get help and support I need from colleagues”. The Cronbach’s alpha was 0.82 for the original English scale and 0.89 for the Italian scale.

## Workload

Workload was measured with the Italian short version of the workload scale (Edwards et al., 2008; Toderi et al., 2013). We discarded two of the eight items originally included in the scale because of a lack of fit in the local school context. Items are rated on a 5-point Likert-type scale, with responses ranging from 1 (“never”) to 5 (“always”). An item example is “I am pressured to work long hours”. The Cronbach’s alpha was 0.87 for the original English scale and 0.84 for the Italian scale.

## Teacher self-efficacy

To assess teacher self-efficacy, the Italian version of the Teacher Self-Efficacy Scale (Marcionetti & Castelli, in press) originally developed by Schwarzer et al. (1999) was used. The scale includes ten items rated on a 4-point Likert scale from 1 (“not true at all”) to 4 (“totally true”). An example item is “If I try hard enough, I know that I can exert a positive influence on both the personal and academic development of my students”. The Cronbach’s alpha was between 0.76 and 0.82 for the original scale (validated on three samples of teachers) and 0.86 for the Italian scale.

## Data analysis

First, confirmatory factor analysis (CFA) was performed for each scale. A covariance matrix was generated to run the models. To assess the adequateness of measurement models with small degrees of freedom (Kenny et al., 2015), we relied on the comparative fit index (CFI) and the Tucker–Lewis index (TLI), which indicate good fit when values are approximately 0.90 or above (Medsker et al., 1994). We

also inspected factor loadings that were adequate when above 0.40. Internal consistency was assessed with Cronbach's alpha. Second, means, standard deviations, and correlations between the variables were calculated. Then, to assess the hypotheses illustrated in Figure 1, we started by specifying a structural equation model (SEM) for the full sample. The original scale items were used as observed variables, and the covariance matrix generated to run the CFA was used to run SEM models. To assess model fit, we used the  $\chi^2$  per degrees of freedom ( $\chi^2/\text{df}$ ), which indicates a good fit when the value is equal to or below 3 (Kline, 2005), the already mentioned CFI and TLI, and the root mean square error of approximation (RMSEA) value, which is an indicator of good fit when it is below 0.05, although a RMSEA value of approximately 0.08 or less is also acceptable (Byrne, 2010). Second, a multiple-group model was tested to investigate whether the estimated effects were similar for female and male teachers. To do this, measurement invariance was tested by inspecting changes in fit across the configural, weak invariance, and structural models. As recommended by Chen (2007), the assumption of invariance across models was considered to be tenable if  $\Delta\text{CFI} < 0.01$  and  $\Delta\text{RMSEA} < 0.015$ .

## Results

CFA with acceptable/good TLI and CFI values and factor loadings well above 0.40 confirmed the adequateness of the measures used. Particular attention was given to the ad hoc created job satisfaction scale, on which the factor loadings ranged from 0.51 to 0.84, and the TLI and CFI were 0.91 and 0.95, respectively, and to the adapted workload scale, on which the factor loadings ranged from 0.59 to 0.79, and the TLI and CFI were 0.94 and 0.97, respectively. The Cronbach's alpha, means, standard deviations, and correlations between the variables included in this study are presented in Table 1. The Cronbach's alpha ranged from 0.80 to 0.88, which indicated the good reliability of the scales used. Concerning correlations, the lowest were between self-efficacy and perceived workload ( $r=0.18$ ) and between social support and self-efficacy ( $r=0.19$ ), and the highest were between burnout and perceived workload and between job satisfaction and self-efficacy (both  $r=0.55$ ).

SEM models were then specified, including all constructs as latent variables. The first model (Model 1), including all relations exposed in Figure 1, reached a TLI value slightly under acceptability,  $\chi^2(800) = 1987.572$ ,  $p < 0.000$ , TLI = 0.893, CFI = 0.900, and RMSEA = 0.048. Hence, following modification indices, we finally ran a second model (Model 2) where items 1 and 3 and items 9 and 10 of the self-efficacy scale, items 1 and 4 of the optimism scale, and items 3 and 4 of the support scale correlated. The fit of this model was adequate,  $\chi^2(796) = 1686.909$ ,  $p < 0.000$ , TLI = 0.919, CFI = 0.925, and RMSEA = 0.042. Estimates for significant and non-significant pathways are reported in Table 2.

Some paths were nonsignificant; hence, a third model (Model 3) was run where nonsignificant relations were removed. The fit of this model was also good,  $\chi^2(801) = 1692.753$ ,  $p < 0.000$ , TLI = 0.920, CFI = 0.925, and RMSEA = 0.042. A fourth model, which had the same indices of fit as the last one, was specified with life satisfaction predicting job satisfaction to also test this relation. The beta value of

**Table 1** Cronbach's alpha, mean, standard deviation, and correlation matrix

	$\alpha$	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1	.88	5.19	0.99						
2	.86	3.44	0.42	.47***					
3	.83	2.37	0.75	-.43***	-.38***				
4	.80	2.71	0.58	.51***	.31***	-.37***			
5	.87	3.63	0.77	.23***	.28***	-.22***	.25***		
6	.85	2.86	0.65	-.28***	-.21***	.55***	-.24***	-.22***	
7	.84	3.06	0.41	.31***	.55***	-.30***	.35***	.19***	-.18***

$\alpha$  Cronbach's alpha, *M* mean, *SD* standard deviation

\*\*\**p* < .001

**Table 2** Results of SEM analysis, model 2

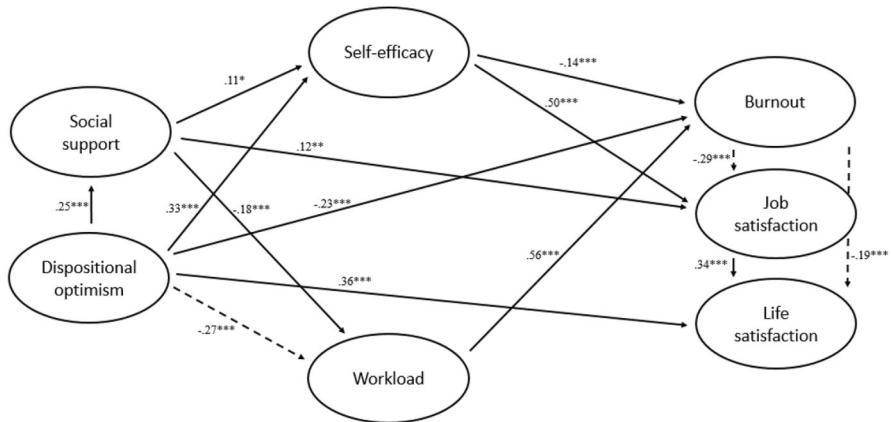
Link			<i>B</i>	<i>SE</i>	$\beta$
Optimism	→	Support	0.48	0.09	.25***
Optimism	→	Self-efficacy	0.28	0.05	.33***
Support	→	Self-efficacy	0.05	0.02	.10*
Support	→	Workload	− 0.13	0.03	−.17***
Self-efficacy	→	Workload	− 0.14	0.08	−.08
Optimism	→	Workload	− 0.35	0.08	−.24***
Optimism	→	Burnout	− 0.33	0.07	−.23***
Support	→	Burnout	− 0.02	0.03	−.03
Self-efficacy	→	Burnout	− 0.21	0.07	−.13**
Workload	→	Burnout	0.56	0.05	.56***
Optimism	→	Job satisfaction	− 0.01	0.04	−.01
Support	→	Job satisfaction	0.06	0.02	.13***
Self-efficacy	→	Job satisfaction	0.56	0.06	.50***
Workload	→	Job satisfaction	0.06	0.04	.09
Burnout	→	Job satisfaction	− 0.24	0.04	−.36***
Optimism	→	Life satisfaction	0.83	0.11	.36***
Workload	→	Life satisfaction	− 0.01	0.09	−.01
Burnout	→	Life satisfaction	− 0.32	0.10	−.19**
Job satisfaction	→	Life satisfaction	0.82	0.11	.34***

*B* unstandardized beta, *SE* standard error,  $\beta$  standardized beta

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

this path was significant and slightly smaller than that of the inverted path (0.30 vs 0.34). Hence, we chose to consider the third model as our final model.

On this model, using multiple-group SEM, we tested gender invariance to confirm that the model was adequate for both female and male teachers. First, weak factorial invariance (all factor loadings constrained to be equal between the two groups) was analyzed, testing for differences across the weak and configural models. The values obtained for the configural model [ $\chi^2(1602) = 2645.879$ ,  $p < 0.000$ , TLI = 0.907, CFI = 0.914, and RMSEA = 0.032] were very similar to those observed for the weak invariance model [ $\chi^2(1637) = 2679.945$ ,  $p < 0.000$ , TLI = 0.910, CFI = 0.914, and RMSEA = 0.032]. These analyses thus confirmed a weak factor invariance ( $\Delta$ CFI and  $\Delta$ RMSEA = 0.000). Second, a model with pathways constrained to be equal across the two groups was tested to investigate whether there were any differences ascribable to pathways between latent variables. The model constraining pathways to be equal was not significantly worse than the weak invariance model [ $\chi^2(1693) = 2824.928$ ,  $p < 0.000$ , TLI = 0.905, CFI = 0.907, RMSEA = 0.032;



**Figure 2** Structural equation model predicting teacher well-being based on Lent and Brown (2006, 2008) Model, Model 3. Note Dotted line = links added to Lent and Brown model. \* $p < .05$ . \*\* $p < .01$  \*\*\* $p < .001$

$\Delta CFI = 0.007$ ,  $\Delta RMSEA = 0.000$ ], which indicated that the model is appropriate for both female and male teachers.

In the third model (Model 3), whose standardized beta values are presented in Figure 2, dispositional optimism directly and positively influences the perception of being supported by colleagues, teacher self-efficacy, and life satisfaction and negatively influences burnout and the perception of workload; the perception of support from colleagues directly and positively influences teacher self-efficacy and job satisfaction and negatively influences the perception of workload; and workload only but highly affects burnout. Teachers' self-efficacy directly and positively influences job satisfaction and, negatively, burnout. Burnout has a negative effect on job satisfaction and life satisfaction. Finally, job satisfaction has a positive effect on life satisfaction. The model permitted us to explain 52%, 48%, and 49% of burnout, job satisfaction, and life satisfaction variance, respectively.

## Discussion

In this study, we tested a model based on Lent and Brown's (2006, 2008) model, which describes the relation between teachers' dispositional optimism, perception of social support, self-efficacy, workload, burnout, job and life satisfaction, and gender invariance. In the model, the construct of burnout was included as another important indicator of occupational well-being for teachers, in addition to job satisfaction. The aim of the study was to provide additional information about relationships theorized in the Lent and Brown (2006, 2008) SCM-JS (see Figure 1) and, in particular, on those links that were only partially supported by empirical studies (see "Current study" section). The results are discussed by considering all the hypothesized relationships.

## **Job satisfaction and life satisfaction**

In line with SCM-JS and with our hypothesis (Figure 1), in our model life satisfaction is directly influenced by job satisfaction. However, in line with previous literature, the inverted link between life satisfaction and job satisfaction has also emerged as promising (Bialowolski & Weziak-Bialowolska, 2020; Bowling et al., 2010; Schmitt & Pulakos, 1985; Unanue et al., 2017). This finding further corroborates the hypothesis that these variables might positively influence one another. Thus, if good job satisfaction allows people to be happier with their lives in general, life satisfaction, in turn, could affect their job satisfaction by allowing people to adopt personal goals (Luhmann & Hennecke, 2017).

## **Burnout, job satisfaction, and life satisfaction**

Our model suggests that burnout relates directly to both job satisfaction (Rutherford et al., 2011; Singh et al., 1994) and life satisfaction (David & Quintao, 2012; Hakanen & Schaufeli, 2012; Hayes & Weathington, 2007). To our knowledge, the relation of burnout with job satisfaction has rarely been assessed in teachers. This result also suggests that job satisfaction might be a partial mediator of the relationship between burnout and life satisfaction. Hence, burnout might be important to explain low levels of job (and life) satisfaction in teachers and, given its high incidence in this professional category (Schaufeli & Enzmann, 1998), should be included in models explaining the processes underlying teachers' well-being.

## **The effect of workload on burnout, job satisfaction, and life satisfaction**

In contrast to the results of the study by Goh et al. (2015), in our model the relationship between teachers' perceived workload and life satisfaction appears to be only indirect, as stated in the SCM-JS. However, the effect is mediated by burnout and not by job satisfaction, which is in line with the results of Bowling et al. (2015), which show that workload does not have a direct association with job satisfaction.

## **Self-efficacy, workload, and job satisfaction**

In contrast to the only other study considering the Lent and Brown (2008) model's factors to study job satisfaction in teachers (Lent et al., 2011), our study strongly confirms (with a  $\beta$  value of 0.50) the direct relation between self-efficacy and job satisfaction. This means that among Swiss teachers, the perception of being good at their job directly increases professional satisfaction. However, unlike Lent and Brown's (2006, 2008) model and the results of Lent et al. (2011), in our model teachers' self-efficacy does not directly influence the perception of workload. Hence, Swiss teachers' efficacy beliefs can surely influence their choice of activities, the effort they expend on an activity, and how long they will persevere when facing obstacles (Bandura, 2006); however, those beliefs are less likely to affect their perception of workload.

### **The effect of perceived support on self-efficacy, workload, and job satisfaction**

Moreover, in our model, it emerged that both teachers' self-efficacy and workload perception, as well as job satisfaction, were directly influenced by the perception of receiving support from colleagues. This result is in line with the SCM-JS. This finding is also in line with the results of previous studies, which have highlighted that positive interpersonal relationships play a key role in teachers' work and contribute to increasing teachers' self-efficacy (Beasley et al., 2013; Huang et al., 2019; Van Droogenbroeck et al., 2014), reducing the work strain experienced, and mitigating perceived stressors (Bowling et al., 2015; Cano-García et al., 2005; Gavish & Friedman, 2010; Viswesvaran et al., 1999).

### **The effect of dispositional optimism on social support, self-efficacy, workload, burnout, and life satisfaction**

It is also interesting to observe the effect of personality traits that emerged in our model that are mainly in line with SCM-JS. Consistently with previous studies, perceived support from colleagues and self-efficacy (Karademas, 2006) are positively affected by dispositional optimism. In line with the literature (Gardner & Parkinson, 2011; Reed, 2016), our study also suggests that a direct relationship between dispositional optimism (personality) and perceived workload (work conditions) can be added to SCM-JS. Indeed, it appears that more optimistic teachers are likely to perceive less workload. Dispositional optimism, according to the Hayes and Weathington (2007) study, also affects burnout and in our model is the only direct predictor of life satisfaction (Harju & Bolen, 1998; Malinauskas & Vaicekouskas, 2013; Reed, 2016), aside from the two other well-being indicators, i.e., burnout and job satisfaction. This personality characteristic thus seems to be an important antecedent, both direct and indirect, of (teacher) well-being. Indeed, in line with SCM-JS, it seems to increase the chance to benefit from colleagues' support, to have higher feelings of self-efficacy, and to increase levels of life satisfaction. Even if a direct relation between dispositional optimism and job satisfaction did not emerge, this link might be mediated by perceptions of colleagues' support, self-efficacy, and burnout. Thus, the results of our study confirm that even among teachers, optimists, compared to pessimists, have better social relationships (Neff & Geers, 2013; Srivastava et al., 2006), can handle difficult situations better (Wrosch & Scheier, 2003), and have better mental and physical health (Kim et al., 2011; Schweizer et al., 1999), which increases their likelihood of success at work (Seligman & Schulman, 1986).

### **Antecedents of burnout and job satisfaction**

As previously stated, unlike with the SCM-JS, in our study, dispositional optimism does not affect job satisfaction, whereas in line with previous studies it does affect burnout (Hayes & Weathington, 2007). Similarly, in our model and in line with Bowling et al. (2015), workload does not directly affect job satisfaction, whereas in line with the studies from Alarcon (2011) and Avanzi et al. (2018), it does affect



burnout. In the same perspective, unlike other empirical findings (Betoret, 2006; Cano-García et al., 2005; Doudin et al., 2011; Gavish & Friedman, 2010; Halbesleben, 2006; Prins et al., 2007), in our model, perceived support from colleagues does not have a direct effect on burnout, whereas in line with the SCM-JS, it does affect job satisfaction. Hence, the only construct that, according to the SCM-JS and previous literature (Caprara et al., 2006; Klassen & Chiu, 2010; Malinen & Savolainen, 2016; Schwarzer & Hallum, 2008; Skaalvik & Skaalvik, 2016), seems to affect both burnout and job satisfaction is self-efficacy. The link is, however, stronger with job satisfaction ( $\beta=0.50$ ) than with burnout ( $\beta=-0.14$ ). Thus, adding the construct of burnout into the model allowed us to clarify that burnout is mostly affected by perceived working conditions (workload) and personality, job satisfaction is mostly influenced by self-efficacy beliefs. Our model thus allowed us to further clarify both the relationship between burnout and job and life satisfaction and the potential direct antecedents of burnout and job and life satisfaction.

### Limitations of study and suggestions for future research

This study of teacher well-being, which builds on Lent and Brown's (2006, 2008) SCM-JS and adds the important construct of burnout, allows for clarification of how teachers' dispositional optimism, perceptions of social support, self-efficacy, perceived workload, burnout, and job and life satisfaction connect. However, the cross-sectional design of this study does not permit us to make causality inferences or to be sure of the mediation effects that emerged. This is the strongest limitation of this research, which further highlights the need for longitudinal studies that investigate more in depth the mediation effects that emerged, as well as the life satisfaction-job satisfaction relationship where the temporal dimension is taken into account. In addition, a larger sample would have allowed further analysis, such as the model invariance test between school sectors. The differences that emerged between some studies conducted on teachers could in fact be due to differences related to the school sector in which teachers work (and therefore strongly dependent on the composition of the sample). For example, differences in the support available in school between primary school teachers who work in small school institutes and other teachers who work in larger schools with more colleagues might lead to slightly different results for this group of teachers. Finally, this model should be further tested with teachers working in different educational contexts to ensure that it can be generalized to contexts outside Switzerland. However, the consistency of much of the relationships that emerged in our model with those hypothesized by Lent and Brown (2006, 2008) and with those confirmed in the existing literature allows us to infer good reliability for the results of our study.

## Conclusion

Regarding the practical implications, the results of this study indicate that fostering teacher optimism, self-efficacy, and good relationships with colleagues might be crucial to reduce the risk of burnout and increase teacher job (and life) satisfaction. Even if trying to modify a personality characteristic such as dispositional optimism seems to be difficult, studies have shown that it is, however, possible to learn to be more optimistic (Seligman, 1998). The perceived school climate has been related to teachers' job satisfaction; this relationship is partly mediated by self-efficacy (Malinen & Savolainen, 2016). Creating a positive climate at school might also foster an optimistic view on (work and) life. A positive climate where teachers have good relationships with their colleagues, which also means the possibility to discuss and reflect together about their daily work matters and find solutions to problematic situations, thereby increasing their self-efficacy, might be important to diminishing the risk of burnout and increasing teacher job and life satisfaction.

**Funding** Open access funding provided by SUPSI - University of Applied Sciences and Arts of Southern Switzerland. This research was funded by government grants from DECS (Department of Education Culture and Sports, Cantone Ticino, Switzerland), but no funding was received to assist with the preparation of this manuscript.

## Declarations

**Conflict of interest** The authors have no relevant financial or non-financial interests to disclose.

**Ethical Approval** An invitation letter was sent by the DECS to invite teachers to participate in the study, and provided them with information about the study and the link to the online questionnaire. The letter stated that participation in the study was not mandatory and that, in any case, participation in the study was completely anonymous.

**Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

## References

- Alarcon, G. M. (2011). A meta-analysis of burnout with job demands, resources, and attitudes. *Journal of Vocational Behavior*, 79(2), 549–562. <https://doi.org/10.1016/j.jvb.2011.03.007>
- Avanzi, L., Fraccaroli, F., Castelli, L., Marcionetti, J., Crescentini, A., & van Dick, R. (2018). How to mobilize social support against workload and burnout: The role of organizational identification. *Teaching and Teacher Education*, 69, 154–167. <https://doi.org/10.1016/j.tate.2017.10.001>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman and Company.

- Bandura, A. (2006). Guide for constructing self-efficacy scales. In F. Pajares & T. Urdan (Eds.). *Self-efficacy beliefs of adolescents*, (Vol. 5., pp. 307–337). Information Age Publishing.
- Beasley, J., Gartin, B., Lincoln, F., & Penner-Williams, J. (2013). Teacher efficacy and practice in meeting the needs of diverse learners: How do partnerships support teachers?. *SRATE Journal*, 22(2), 1–7.
- Betoret, F. D. (2006). Stressor, self-efficacy, coping resources, and burnout among secondary school teachers in Spain. *Educational Psychology*, 26(4), 519–539. <https://doi.org/10.1080/01443410500342492>
- Bialowolski, P., & Weziak-Bialowolska, D. (2020). Longitudinal evidence for reciprocal effects between life satisfaction and job satisfaction. *Journal of Happiness Studies*, 22(3), 1287–1312. <https://doi.org/10.1007/s10902-020-00273-1>
- Boehm, J. K., & Lyubomirsky, S. (2008). Does happiness promote career success? *Journal of Career Assessment*, 16(1), 101–116. <https://doi.org/10.1177/106907270730814>
- Bowling, N. A., Alarcon, G. M., Bragg, C. B., & Hartman, M. J. (2015). A meta-analytic examination of the potential correlates and consequences of workload. *Work & Stress: An International Journal of Work, Health & Organisations*, 29(2), 95–113. <https://doi.org/10.1080/02678373.2015.1033037>
- Bowling, N. A., Eschleman, K. J., & Wang, Q. (2010). A meta-analytic examination of the relationship between job satisfaction and subjective well-being. *Journal of Occupational and Organizational Psychology*, 83(4), 915–934. <https://doi.org/10.1348/096317909X478557>
- Byrne, B. (2010). *Structural equation modelling with AMOS* (2nd ed.). Routledge.
- Cano-García, F. J., Padilla-Muñoz, E. M., & Carrasco-Ortiz, M. Á. (2005). Personality and contextual variables in teacher burnout. *Personality and Individual Differences*, 38(4), 929–940. <https://doi.org/10.1016/j.paid.2004.06.018>
- Caprara, G. V., Barbaranelli, C., Steca, P., & Malone, P. S. (2006). Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: A study at the school level. *Journal of School Psychology*, 44(6), 473–490. <https://doi.org/10.1016/j.jsp.2006.09.001>
- Carver, C. S., & Scheier, M. F. (2014). Dispositional optimism. *Trends in Cognitive Sciences*, 18(6), 293–299. <https://doi.org/10.1016/j.tics.2014.02.003>
- Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling*, 14(3), 464–504. <https://doi.org/10.1080/10705510701301834>
- Cobb, S. (1976). Social support as a moderator of life stress. *Psychosomatic Medicine*, 38(5), 300–314. <https://doi.org/10.1097/00006842-197609000-00003>
- David, I. C., & Quintao, S. (2012). Burnout in teachers: Its relationship with personality, coping strategies and life satisfaction. *Acta Médica Portuguesa*, 25(3), 145–155.
- De Neve, J.-E., & Oswald, A. J. (2012). Estimating the influence of life satisfaction and positive affect on later income using sibling fixed effects. *PNAS*, 109(49), 19953–19958. <https://doi.org/10.1073/pnas.1211437109>
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2000). A model of burnout and life satisfaction among nurses. *Journal of Advanced Nursing*, 32(2), 454–464. <https://doi.org/10.1046/j.1365-2648.2000.01496.x>
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86(3), 499–512. <https://doi.org/10.1037/0021-9010.86.3.499>
- DeNeve, K. M., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin*, 124(2), 197–229. <https://doi.org/10.1037/0033-2909.124.2.197>
- Di Fabio, A., & Palazzeschi, L. (2012). The Satisfaction With Life Scale (SWLS): un contributo alla validazione italiana con lavoratori adulti. [The Satisfaction With Life Scale (SWLS): A contribution to the Italian validation with adult workers]. *Counseling*, 5(2), 207–215.
- Diener, E., & Tay, L. (2012). *A scientific review of the remarkable benefits of happiness for successful and healthy living. Report of the Well-Being Working Group, Royal Government of Bhutan. Report to the United Nations General Assembly: Well-Being and Happiness: A New Development Paradigm* (pp. 90–117). United Nations.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95(3), 542–575. <https://doi.org/10.1037/0033-2909.95>
- Diener, E., & Chan, M. Y. (2011). Happy people live longer: Subjective well-being contributes to health and longevity. *Applied Psychology: Health and Well-Being*, 3(1), 1–43. <https://doi.org/10.1111/j.1758-0854.2010.01045.x>

- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71–75. [https://doi.org/10.1207/s15327752jpa4901\\_13](https://doi.org/10.1207/s15327752jpa4901_13)
- Doudin, P.-A., Curchod-Ruedi, D., & Moreau, J. (2011). Le soutien social comme acteur de protection de l'épuisement des enseignants [Social support as an actor protecting teachers from emotional exhaustion]. In P.-A. Doudin, D. Curchod-Ruedi, L. Lafortune, & N. Lafranchise (Eds.), *La santé psychosociale des enseignants et des enseignantes [Teachers' psychosocial health]* (pp. 12–37). PUQ.
- Duffy, R. D., & Lent, R. W. (2009). Test of a social cognitive model of work satisfaction in teachers. *Journal of Vocational Behavior*, 75(2), 212–223. <https://doi.org/10.1016/j.jvb.2009.06.001>
- Edwards, J. A., Webster, S., Van Laar, D., & Easton, S. (2008). Psychometric analysis of the UK health and safety executive's management standards work-related stress indicator tool. *Work & Stress*, 22(2), 96–107. <https://doi.org/10.1080/02678370802166599>
- Fairbrother, K., & Warn, J. (2003). Workplace dimension: Stress and job satisfaction. *Journal of Managerial Psychology*, 18(1), 8–21. <https://doi.org/10.1108/02683940310459565>
- Gardner, D. H., & Parkinson, T. J. (2011). Optimism, self-esteem, and social support as mediators of the relationships among workload, stress, and well-being in veterinary students. *Journal of Veterinary Medical Education*, 38(1), 60–66. <https://doi.org/10.3138/jvme.38.1.60>
- Gavish, B., & Friedman, I. A. (2010). Novice teacher's experience of teaching: A dynamic aspect of burnout. *Social Psychology of Education*, 13(2), 141–167. <https://doi.org/10.1007/s11218-009-9108-0>
- Giannini, M., Schuldberg, D., Di Fabio, A., & Gargaro, D. (2008). Misurare l'ottimismo: proprietà psicometriche della versione italiana del Life Orientation Test-Revised (LOT-R). [Measuring optimism: psychometric properties of the Italian version of the Life Orientation Test-Revised (LOT-R)]. *Counseling*, 1(1), 73–84.
- Goh, Z., Iliès, R., & Schwind Wilson, K. (2015). Supportive supervisors improve employees' daily lives: The role supervisors play in the impact of daily workload on life satisfaction via work–family conflict. *Journal of Vocational Behavior*, 89, 65–73. <https://doi.org/10.1016/j.jvb.2015.04.009>
- Grayson, J. L., & Alvarez, H. K. (2008). School climate factors relating to teacher burnout: A mediator model. *Teaching and Teacher Education*, 24(5), 1349–1363. <https://doi.org/10.1016/j.tate.2007.06.005>
- Hakanen, J. J., & Schaufeli, W. B. (2012). Do burnout and work engagement predict depressive symptoms and life satisfaction? A three-wave seven-year prospective study. *Journal of Affective Disorders*, 141(2), 415–424. <https://doi.org/10.1016/j.jad.2012.02.043>
- Halbesleben, J. R. B. (2006). Sources of social support and burnout: A meta-analytic test of the conservation of resources model. *Journal of Applied Psychology*, 91(5), 1134–1145. <https://doi.org/10.1037/0021-9010.91.5.1134>
- Harju, B. L., & Bolen, L. M. (1998). The effects of optimism on coping and perceived quality of life of college students. *Journal of Social Behaviour & Personality*, 13(2), 185–200.
- Hayes, C. T., & Weathington, B. L. (2007). Optimism, stress, life satisfaction, and job burnout in restaurant managers. *The Journal of Psychology*, 141(6), 565–579. <https://doi.org/10.3200/JRLP.141.6.565-580>
- Huang, S., Yin, H., & Lv, L. (2019). Job characteristics and teacher well-being: The mediation of teacher self-monitoring and teacher self-efficacy. *Educational Psychology*, 39(3), 313–331. <https://doi.org/10.1080/01443410.2018.1543855>
- Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal*, 38(3), 499–534. <https://doi.org/10.3102/00028312038003499>
- Johnson, J. V., & Hall, E. M. (1988). Job strain, work place social support, and cardiovascular disease: A cross-sectional study of a random sample of the Swedish working population. *American Journal of Public Health*, 78(10), 1336–1342. <https://doi.org/10.2105/AJPH.78.10.1336>
- Karademas, E. C. (2006). Self-efficacy, social support and well-being: The mediating role of optimism. *Personality and Individual Differences*, 40(6), 1281–1290. <https://doi.org/10.1016/j.paid.2005.10.019>
- Karasek, R. A. (1998). Demand/Control Model: A social, emotional, and physiological approach to stress risk and active behaviour development. In J. M. Stellman (Ed.), *Encyclopaedia of occupational health and safety* (pp. 34.6–34.14). ILO.
- Karasek, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, 24(2), 285–307. <https://doi.org/10.2307/2392498>

- Kenny, D. A., Kaniskan, B., & McCoach, D. B. (2015). The performance of RMSEA in models with small degrees of freedom. *Sociological Methods & Research*, *44*(3), 486–507. <https://doi.org/10.1177/0049124114543236>
- Kim, E. S., Park, N., & Peterson, C. (2011). Dispositional optimism protects older adults from stroke: The health and retirement study. *Stroke*, *42*(10), 2855–2859. <https://doi.org/10.1161/STROKE.EAHA.111.613448>
- Klassen, R., & Chiu, M. M. (2010). Effects of 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>
- Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). The Guilford Press.
- Kokkinos, C. M. (2007). Job stressors, personality and burnout in primary school teachers. *The British Journal of Educational Psychology*, *77*(1), 229–243. <https://doi.org/10.1348/000709905X90344>
- Korte, D. S., & Simonsen, J. C. (2018). Influence of social support on teacher self-efficacy in novice agricultural education teachers. *Journal of Agricultural Education*, *59*(3), 100–123. <https://doi.org/10.5032/jae.2018.03100>
- Kristensen, T., Borritz, M., Villadsen, E., & Christensen, K. B. (2005). The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. *Work & Stress*, *19*(3), 192–207. <https://doi.org/10.1080/02678370500297720>
- Leavy, R. L. (1983). Social support and psychological disorder: A review. *Journal of Community Psychology*, *11*(1), 3–21. [https://doi.org/10.1002/1520-6629\(198301\)11:1%3c3::AID-JCOP2290110102%3e3.0.CO;2-E](https://doi.org/10.1002/1520-6629(198301)11:1%3c3::AID-JCOP2290110102%3e3.0.CO;2-E)
- Lent, R. W., & Brown, S. D. (2006). Integrating person and situation perspectives on work satisfaction: A social-cognitive view. *Journal of Vocational Behavior*, *69*(2), 236–247. <https://doi.org/10.1016/j.jvb.2006.02.006>
- Lent, R. W., & Brown, S. D. (2008). Social cognitive career theory and subjective well-being in the context of work. *Journal of Career Assessment*, *16*(1), 6–21. <https://doi.org/10.1177/1069072707305769>
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, *45*(1), 79–122. <https://doi.org/10.1006/jvbe.1994.1027>
- Lent, R. W., Nota, L., Soresi, S., Ginevra, M. C., Duffy, R. D., & Brown, S. D. (2011). Predicting the job and life satisfaction of Italian teachers: Test of a social cognitive model. *Journal of Vocational Behavior*, *79*(1), 91–97. <https://doi.org/10.1016/j.jvb.2010.12.006>
- Locke, E. A. (1976). The nature and causes of job satisfaction. In Dunnette, M. D., Ed., *Handbook of Industrial and Organizational Psychology* (Vol. 1, pp. 1297–1343). Rand McNally.
- Lodolo D'Orta, V., Giraldi, F. P., Della Torre, M., Fasano, A. I., Vizzi, F., Fontani, S., Vitello, A., Cantoni, S., Pascale, A., & Frigoli, P. (2004). Quale rischio di patologia psichiatrica per la categoria professionale degli insegnanti? [Is there any correlation between psychiatric disease and the teaching profession?]. *Medicina Del Lavoro*, *95*(5), 339–353.
- Luhmann, M., & Hennecke, M. (2017). The motivational consequences of life satisfaction. *Motivation Science*, *3*(1), 51–75. <https://doi.org/10.1037/mot0000048>
- Luhmann, M., Lucas, R. E., Eid, M., & Diener, E. (2013). The prospective effect of life satisfaction on life events. *Social Psychological and Personality Science*, *4*(1), 39–45. <https://doi.org/10.1177/1948550612440105>
- Malinauskas, R., & Vaicekaskas, A. (2013). Well-being, activity, mood and optimistic way of thinking of adolescent athletes. *Health Sciences*, *23*(2), 25–27. <https://doi.org/10.5200/sm-hs.2013.038>
- Malinen, O.-P., & Savolainen, H. (2016). The effect of perceived school climate and teacher efficacy in behavior management on job satisfaction and burnout: A longitudinal study. *Teaching and Teacher Education*, *60*, 144–152. <https://doi.org/10.1016/j.tate.2016.08.012>
- Marcionetti, J., & Castelli, L. (in press). Validation of a teacher self-efficacy scale in Italian and relations with relationship with colleagues, school leadership, school innovativeness, teacher autonomy, role clarity, and role conflicts. *TPM - Testing, Psychometrics, Methodology in Applied Psychology*.
- Marcionetti, J., Castelli, L., Crescentini, A., Avanzi, L., Fraccaroli, F., & Balducci, B. (2018). Validation of a short scale in Italian to measure teacher burnout. *Swiss Journal of Psychology*, *77*(2), 49–58. <https://doi.org/10.1024/1421-0185/a000208>
- Maslach, C., & Jackson, S. E. (1986). *Maslach burnout inventory* (2nd ed.). Consulting Psychologist Press.

- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52(1), 397–422. <https://doi.org/10.1146/annurev.psych.52.1.397>
- Medsker, G. J., Williams, L. J., & Holahan, P. J. (1994). A review of current practices for evaluating causal models in organizational behavior and human resources management research. *Journal of Management*, 20(2), 439–464. <https://doi.org/10.1177/014920639402000207>
- Melamed, S., Shirom, A., Toker, S., Berliner, S., & Shapira, I. (2006). Burnout and risk of cardiovascular disease: Evidence, possible causal paths, and promising research directions. *Psychological Bulletin*, 132(3), 327–353. <https://doi.org/10.1037/0033-2909.132.3.327>
- Milfont, T. L., Denny, S., Ameratunga, S., Robinson, E., & Merry, S. (2008). Burnout and wellbeing: Testing the Copenhagen Burnout Inventory in New Zealand teachers. *Social Indicators Research*, 89(1), 169–177. <https://doi.org/10.1007/s11205-007-9229-9>
- Neff, L. A., & Geers, A. L. (2013). Optimistic expectations in early marriage: A resource or vulnerability for adaptive relationship functioning? *Journal of Personality and Social Psychology*, 105(1), 38–60. <https://doi.org/10.1037/a0032600>
- Oishi, S., Diener, E., & Lucas, R. E. (2007). The optimum level of well-being: Can people be too happy? *Perspectives on Psychological Science*, 2(4), 346–360. <https://doi.org/10.1111/j.1745-6916.2007.00048.x>
- Pavot, W., & Diener, E. (1993). Review of the Satisfaction With Life Scale. *Psychological Assessment*, 5(2), 164–172. <https://doi.org/10.1037/1040-3590.5.2.164>
- Prins, J. T., Hoekstra-Webers, J. E. H. M., Gazendam-Donofrio, S. M., Van De Wiel, H. B. M., Sprangers, F., Jaspers, F. C. A., & van der Heijden, F. M. M. A. (2007). The role of social support in burnout among Dutch medical residents. *Psychology, Health & Medicine*, 12(1), 1–6. <https://doi.org/10.1080/13548500600782214>
- Reed, D. J. (2016). Coping with occupational stress: The role of optimism and coping flexibility. *Psychology Research and Behavior Management*, 9, 71–79. <https://doi.org/10.2147/PRBM.S97595>
- Rutherford, B. N., JungKun, P., & Sang-Lin, H. (2011). Increasing job performance and decreasing salesperson propensity to leave: An examination of an Asian sales force. *Journal of Personal Selling & Sales Management*, 31(2), 171–183. <https://doi.org/10.2753/PSS0885-3134310205>
- Schaufeli, W. B., & Enzmann, D. (1998). *The burnout companion to study and practice: A critical analysis*. Taylor & Francis.
- Schaufeli, W. B., & Greenglass, E. R. (2001). Introduction to special issue on burnout and health. *Psychology and Health*, 16(5), 501–510. <https://doi.org/10.1080/08870440108405523>
- Schaufeli, W. B., Leiter, M. P., & Maslach, C. (2009). Burnout: 35 years of research and practice. *Career Development International*, 14(3), 204–220. <https://doi.org/10.1108/13620430910966406>
- Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem). A reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology*, 67(6), 1063–1078. <https://doi.org/10.1037/0022-3514.67.6.1063>
- Schmitt, N., & Pulakos, E. D. (1985). Predicting job satisfaction from life satisfaction: Is there a general satisfaction factor? *International Journal of Psychology*, 20(2), 155–167. <https://doi.org/10.1080/00207598508247729>
- Schwarzer, R., & Hallum, S. (2008). Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediation analyses. *Applied Psychology: An International Review*, 57(s1), 152–171. <https://doi.org/10.1111/j.1464-0597.2008.00359.x>
- Schwarzer, R., Schmitz, G.S., & Daytner, G.T. (1999). *The teacher self-efficacy scale*. Retrieved from [http://userpage.fu-berlin.de/~health/teacher\\_se.htm](http://userpage.fu-berlin.de/~health/teacher_se.htm)
- Schweizer, K., Beck-Seyffer, A., & Schneider, R. (1999). Cognitive bias of optimism and its influence on psychological well-being. *Psychological Reports*, 84(2), 627–637. <https://doi.org/10.2466/pr0.1999.84.2.627>
- Segerstrom, S. C. (2006). How does optimism suppress immunity? Evaluation of three affective pathways. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association*, 25(5), 653–657. <https://doi.org/10.1037/0278-6133.25.5.653>
- Seligman, M. E. (1998). *Learned Optimism*. Pocket Books.
- Seligman, M. E., & Schulman, P. (1986). Explanatory style as a predictor of productivity and quitting among life insurance sales agents. *Journal of Personality and Social Psychology*, 50(4), 832–838. <https://doi.org/10.1037/0022-3514.50.4.832>

- Siedlecki, K. L., Salthouse, T. A., Oishi, S., & Jeswani, S. (2013). The relationship between social support and subjective well-being across age. *Social Indicators Research*, 117(2), 561–576. <https://doi.org/10.1007/s11205-013-0361-4>
- Singh, J., Goolsby, J. R., & Rhoads, G. K. (1994). Behavioral and psychological consequences of boundary spanning burnout for customer service representatives. *Journal of Marketing Research*, 31(4), 558–569. <https://doi.org/10.2307/3151883>
- 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(3), 611–625. <https://doi.org/10.1037/0022-0663.99.3.611>
- Skaalvik, E. M., & Skaalvik, S. (2009). Does school context matter? Relations with teacher burnout and job satisfaction. *Teaching and Teacher Education*, 25(3), 518–524. <https://doi.org/10.1016/j.tate.2008.12.006>
- Skaalvik, E. M., & Skaalvik, S. (2016). Teacher stress and teacher self-efficacy as predictors of engagement, emotional exhaustion, and motivation to leave the teaching profession. *Creative Education*, 7(13), 1785–1799. <https://doi.org/10.4236/ce.2016.713182>
- Spector, P. E. (1997). *Job satisfaction: Application, assessment, causes, and consequences*. Sage.
- Srivastava, S., McGonigal, K. M., Richards, J. M., Butler, E. A., & Gross, J. J. (2006). Optimism in close relationships: How seeing things in a positive light makes them so. *Journal of Personality and Social Psychology*, 91(1), 143–153. <https://doi.org/10.1037/0022-3514.91.1.143>
- Steel, P., Schmidt, J., Bosco, F., & Uggerslev, K. (2019). The effects of personality on job satisfaction and life satisfaction: A meta-analytic investigation accounting for bandwidth–fidelity and commensurability. *Human Relations*, 72(2), 217–247. <https://doi.org/10.1177/0018726718771465>
- Toderi, S., Balducci, C., Edwards, J. A., Sarchielli, G., Broccoli, M., & Mancini, G. (2013). Psychometric properties of the UK and Italian versions of the HSE Stress Indicator Tool: A cross-cultural investigation. *European Journal of Psychological Assessment*, 29(1), 72–79. <https://doi.org/10.1027/1015-5759/a000122>
- Unanue, W., Gómez, M. E., Cortez, D., Oyanedel, J. C., & Mendiburo-Seguel, A. (2017). Revisiting the link between job satisfaction and life satisfaction: The role of basic psychological needs. *Frontiers in Psychology*, 8, 680. <https://doi.org/10.3389/fpsyg.2017.00680>
- Usher, E. L., & Pajares, F. (2008). Sources of self-efficacy in school: Critical review of the literature and future directions. *Review of Educational Research*, 78(4), 751–796. <https://doi.org/10.3102/0034654308321456>
- Van Droogenbroeck, F., Spruyt, B., & Vanroelen, C. (2014). Burnout among senior teachers: Investigating the role of workload and interpersonal relationships at work. *Teaching and Teacher Education*, 43, 99–109. <https://doi.org/10.1016/j.tate.2014.07.005>
- Veldman, I., van Tartwijk, J., Brekelmans, M., & Wubbels, T. (2013). Job satisfaction and teacher–student relationships across the teaching career: Four case studies. *Teaching and Teacher Education*, 32, 55–65. <https://doi.org/10.1016/j.tate.2013.01.005>
- Viswesvaran, C., Sanchez, J. I., & Fisher, J. (1999). The role of social support in the process of work stress: A meta-analysis. *Journal of Vocational Behavior*, 54(2), 314–334. <https://doi.org/10.1006/jvbe.1998.1661>
- Wrosch, C., & Scheier, M. (2003). Personality and quality of life: The importance of optimism and goal adjustment. *Quality of Life Research*, 12(s.1), 59–72. <https://doi.org/10.1023/A:1023529606137>
- Yildirim, I. (2008). Relationships between burnout, sources of social support and socio-demographic variables. *Social Behavior and Personality: An International Journal*, 36(5), 603–616. <https://doi.org/10.2224/sbp.2008.36.5.603>

**Publisher's Note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.