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Although much research has focused on the role of job demands and job resources in teacher well-being, few studies have targeted the function of personal variables. The aim of this study is to develop a comprehensive model of teacher well-being, using burnout and engagement in order to reflect, not only job demands and professional resources, but particularly the personal resources that characterise teacher well-being: self-efficacy, and cognitive and behavioural coping resources (proactive and reactive) related to three specific situational demands. Job resources were: autonomy, social support from colleagues and supervisors, and variety and feedback provision at work. Participants were 413 teachers from 47 elementary, primary and secondary schools in Madrid (Spain). The results show paths between the significant variables of the model in the anticipated direction. A line of influence starts in perceived demands and perceived self-efficacy, and is modulated by coping. This generates some degree of teacher well-being, which in turn is affected by teachers' available job resources. Engagement seems to have a considerable effect on burnout.

Keywords: personal resources; self-efficacy; coping; burnout; engagement; teachers

Introduction

Teachers are one of the occupational groups most likely to experience work-related stress, which can turn into the burnout syndrome, one of the most common consequences of chronic stress at work. Burnout has been described as 'a prolonged response to chronic emotional and interpersonal stressors on the job, and is defined by the three dimensions of exhaustion, cynicism and professional inefficacy' (Maslach, Schaufeli, & Leiter, 2001, p. 397). Recent studies report that between 10 and 20% of teachers could be suffering from high burnout levels, and between 20 and 40% from moderate levels (Arís Redó, 2009; Bermejo-Toro & Prieto-Ursúa, 2006; Pozo-Muñoz, Salvador-Ferrer, Alonso-Morillejo, & Martos-Méndez, 2008).

Some of the factors associated with teacher burnout are: students' challenging behaviour (Chang, 2009a; Kokkinos, 2007; Van Der Doef & Maes, 2002), work overload and lack of time (Kokkinos, 2007; Prieto & Bermejo, 2006; Van Der Doef & Maes, 2002), and role conflict and ambiguity (Papastylianou, Kaila, & Polychronopoulos, 2009; Van Der Doef & Maes, 2002). Research into teacher

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burnout has also revealed an important link between perceived working environment (e.g. collective perception of burnout) and individual burnout levels (González-Morales, Peiró, Rodríguez, & Bliese, 2012).

Several studies have also reported the relation between teacher burnout and harmful effects on physical and psychological health (Bakker, 2009; Cenkseven-Önder & Sari, 2009; Papastylianou et al., 2009; Serrano, 2006). Teacher burnout also negatively affects work performance (Fernández Arata, 2008; Ransford, Greenberg, Domitrovich, Small, & Jacobson, 2009) and professional and family relationships (Bakker, Demerouti, & Burke, 2009; Bakker, 2009). In addition, burnout can influence the way teachers perform their work as well as curriculum-specific contents. Ransford et al. (2009) found that teacher burnout was negatively associated with the promotion of alternative thinking strategies linked to socioemotional curriculum.

Nevertheless, as a high percentage of teachers do not suffer from burnout, it would be interesting to study the factors contributing to their professional well-being in order to improve preventive measures. Therefore, in this paper, we have not only studied the negative aspect of stress processes at work – *burnout* – but also a positive aspect – *work engagement*.

Work engagement

Work engagement becomes essential when studying subjective well-being at work (Bakker & Oerlemans, 2011). It is a positive affective-emotional state and sense of accomplishment that includes three dimensions: vigour, dedication and absorption (Schaufeli & Bakker, 2010). *Vigour* is characterised by high energy levels and mental resistance while working – a disposition to make efforts in their own work and persistence even when facing difficulties. *Dedication* is referred to being highly involved in work, having a sense of meaning, and feeling enthusiastic, proud, inspired and challenged. *Absorption* refers to being entirely focused and absorbed in one's work, feeling that time passes quickly while working and having a resistance to disconnect with the present task, due to the high pleasure and concentration experienced.

In summary, engagement includes a behavioural-energetic component (vigour), an emotional component (dedication) and a cognitive component (absorption) (Salanova & Schaufeli, 2009). Research proposes that dedication and vigour can be considered as the two main dimensions or the 'core' dimensions of engagement (González-Romá, Schaufeli, Bakker, & Lloret, 2006). More precisely, vigour and dedication seem to be the contrary poles of exhaustion and cynicism, the two main dimensions of burnout. Exhaustion and vigour constitute a continuum named 'energy', and cynicism and dedication constitute a continuum named 'identification' (González-Romá et al., 2006).

Recent researches have informed that work engagement has positive outcomes at the individual and organisational aspect. For example, Bakker and Bal (2010), in their study with a sample of 54 starting teachers, reported that daily levels of engagement at work could predict classroom achievement. Moreover, Hakanen, Bakker, and Schaufeli (2006) found a predictive role of work engagement in organisational commitment among teachers. Findings from exhaustive interviews indicate that although engaged people work during many hours, they are not obsessed with work as workaholics are (Bakker, Schaufeli, Leiter, & Taris, 2008). Engaged workers do not refuse their social life outside work; in fact, they enjoy spending their

leisure time socialising, taking up hobbies or doing voluntary work (Schaufeli & Salanova, 2007).

The *Job Demands-Resources* model (JD-R, Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), taken as the theoretical frame of this study, has been able to predict burnout and engagement at work (Demerouti & Bakker, 2011). In the context of this model, *job demands* are defined as psychological, physical, social or organisational elements of the employment that involve a constant physical/psychological effort. As a result, job demands are related to some physiological or psychological costs. *Resources* are those psychological, physical, organisational or social aspects from work that can (1) ease the demands and their associated costs, (2) be functional in the sense of helping to achieve objectives at work and (3) encourage individual learning, growth and development. The model describes two processes: (1) an *energy* depletion process (or erosion process) in which high demands drain workers' mental and physical resources and which can result in burnout and potentially health problems and (2) a *motivational* process in which the resources available at work encourage engagement and the consequent commitment to the organisation.

The relevance of personal resources

The demands-resources model has been widely verified in the last few years. However, some issues are still unresolved (Demerouti & Bakker, 2011). For example, the necessity to include *personal resources* in the model, since only strict *job-related resources* were included until recently (Bakker & Bal, 2010; Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; González-Morales et al., 2012; Hakanen et al., 2006; Jackson, Rothmann, & van de Vijver, 2006).

Some recent studies have started to consider personal resources in relation to burnout and engagement as research variables. Such is the case of the Vera, Salanova, and Lorente (2012) longitudinal study carried out with a sample of secondary education teachers. Their in-depth study within the demands-resources model considers self-efficacy as one of the most powerful personal resources. They found that self-efficacy predicts the erosion and motivational processes of work burnout and engagement according to the social cognitive theory (SCT). Consequently, employees with high self-efficacy beliefs consider they have enough aptitude and abilities to face any job demand, and to distinguish and identify how to employ the existing job resources. Therefore, Vera et al. (2012) found that the higher the self-efficacy, the higher the job resources and the lower the burnout over time. Besides, the higher the self-efficacy, the higher the job resources and engagement are over time. According to these results, Vera et al. considered that it is possible to integrate two of the most important theories in occupational health psychology (i.e. the JD-R Model and the SCT). Their findings corroborated what other researchers (e.g. Hakanen et al., 2006) had pointed out about the significance of job resources, which not only elicit engagement, but additionally decrease burnout.

Nevertheless, most research works are concerned with personal resources related to personality traits, and not to specific states. Personal variables studied previously are for example: optimism, resilience or self-esteem (Cheung, Tang, & Tang, 2011; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007).

Therefore, it is important to deepen the research on personal resources that enhance teacher well-being. Job demands are usually common to a large group of workers, but the final experience of burnout or engagement is different in each one.

Probably, this is due to the different implemented coping skills. As a consequence, we considered it relevant to analyse not just dispositional aspects of individuals, but also specific coping behaviours and cognitions used by teachers to successfully address specific situations at work. We wanted to identify specific behavioural and thought processes that, since used by engaged teachers, should be promoted when designing interventions for teachers.

Towards a model of teacher well-being

Hakanen et al. (2006) proposed that teacher burnout mediates the effect between job resources and engagement. The results of their causal model proved this hypothesis. However, it would also be interesting to verify the opposite hypothesis: whether engagement also mediates the effect job resources have on burnout. As resources have a positive effect on engagement, they will in turn have a negative or reductive impact on burnout. In fact, some studies conclude that the engagement construct could actually be altogether independent of burnout, particularly with regard to its vigour dimension (Mäkikangas, Feldt, Kinunen, & Tolvanen, 2012). Besides, engagement has been postulated as an affective state that, according to empirical research, has the potential to generate other resources useful for individuals in stressful situations (Salanova, Martinez, Cifre, & Llorens, 2009).

Therefore, from a positive perspective we considered it necessary to analyse the effect that teacher resources – personal as well as job resources – have on their well-being. Besides offering protection from feeling burnout, they could improve their energy and work identification processes and ultimately their work performance.

The primary aim of our study is to analyse a comprehensive model of teacher well-being including some of the most important teacher job demands, self-efficacy, and various personal and job resources. This model would make it possible to offer specific, individual and organisational guidelines which, based on empirical data, would contribute to the promotion and/or increase of work well-being.

Regarding personal resources, we studied self-efficacy and coping resources in relation to specific situational demands on teachers. Several recent studies have found not only significant relationships between self-efficacy and teacher well-being (job satisfaction, low teacher stress or low burnout), but also a positive significant association between self-efficacy and coping strategies (Briones, Tabernero, & Arenas, 2010; Schen, 2008; Schwarzer & Hallum, 2008). Particularly, self-efficacy seems to be positively related to problem-focused coping strategies, such as active coping or positive thinking, and negatively related to emotion-focused coping strategies (Schen, 2008).

In addition to the usually studied behavioural coping strategies, our research includes cognitive coping strategies (like positive re-interpretation or rational planning) and further behavioural strategies such as assertiveness. These strategies are recommended for intervening in work-related stress, particularly in human service employments, but their relation to teacher well-being has little empirical support.

We are also interested in proactive coping and its opposite side, reactive coping, and the role both play in burnout and engagement. Reactive coping generally refers to responses that follow the stressor. Once the stressor has occurred, coping efforts are directed either to compensate a loss or to alleviate harm (Schwarzer, 2000). In general, this is the type of coping assessed in much of the research until last decade (Schwarzer, 2000). According to Greenglass (2005), proactive coping strategies are

oriented towards future expectations, emphasising the person's capacity for handling goals (anticipating problems and looking for challenges) rather than for risk management (to be reactive to problems). Greenglass' theory (2005) states that proactive coping strategies reduce stress at work. In line with this, Chang (2009b) found that proactive coping is a significant latent factor which co-varies negatively with teacher burnout. Recently, Pietarinen, Pyhältö, Soini, and Salmela-Aro (2013) have provided evidence of the interrelation between teachers' proactive strategies, socio-contextual burnout and perceived teacher-working environment fit. In their meta-analysis work, Christian, Garza, and Slaughter (2011) found a moderate and positive correlation between proactive personality and engagement. Nevertheless, we have not found any study analysing personal coping resources (proactive and reactive) and job resources with regard to burnout and engagement.

We therefore propose a conceptual model of teacher well-being (Figure 1) which will be empirically validated testing the following hypotheses:

> Hypothesis 1: perceived self-efficacy and personal coping resources will modulate the effect of demands on teacher well-being (burnout and engagement).
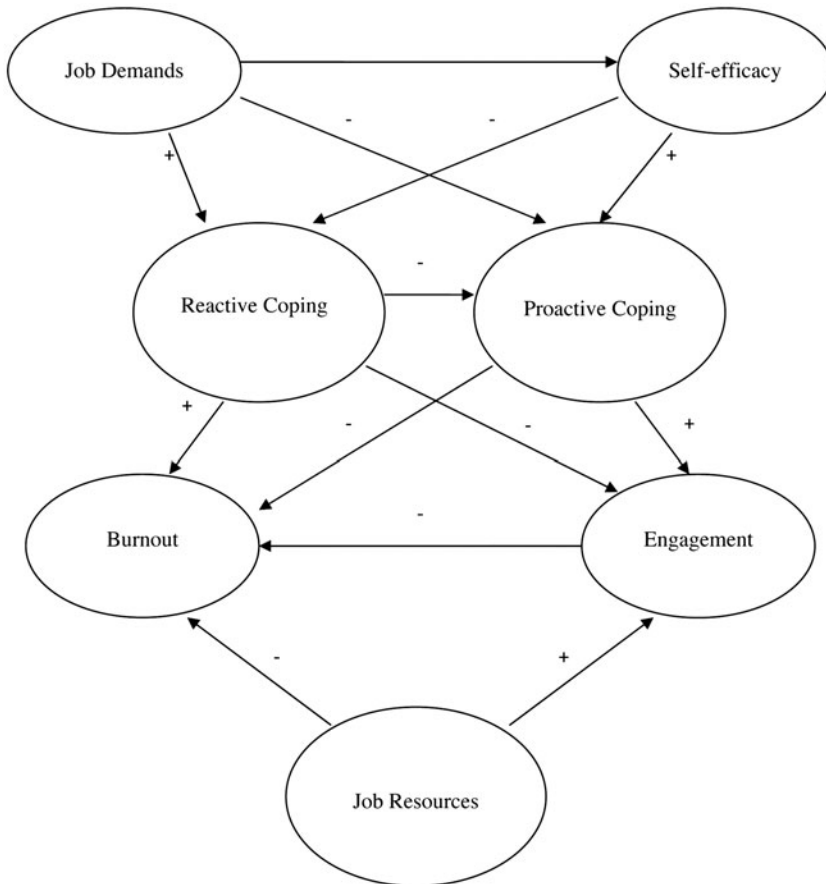

Figure 1.   Conceptual model of demands, personal resources and job resources in teacher well-being.

Hypothesis 2: personal coping resources as well as job resources will have a significant effect on teacher well-being (burnout and engagement).

Hypothesis 2a: reactive personal coping resources will be positively related to burnout and negatively related to engagement, and they will have a bigger effect on burnout than on engagement.

Hypothesis 2b: proactive personal coping resources will be negatively related to burn-out and positively related to engagement, and they will have a bigger effect on engagement than on burnout.

Hypothesis 2c: job resources will be negatively related to burnout and positively related to engagement.

Hypothesis 3: Engagement will show a negative direct relation to burnout and will modulate the relation between demands and burnout and between resources (personal and job-related) and burnout.

This model proposes that the level of perceived demands (independent variable) affects the perceived self-efficacy (mediator variable) in different stressful situations; and both variables at the same time have influence on teacher well-being (burnout and engagement) (dependent variables) mediated by reactive coping and proactive coping resources (mediator variables). The model poses as well that reactive coping modulates the effect of demands over proactive coping. Additionally, this teacher well-being process will be affected by another exogenous or independent variable, job resources. Finally, the model proposes that engagement will have a negative influence over burnout, which means that engaged teachers will have a low probability of suffering from burnout syndrome.

Method

Participants

Participants were 413 teachers from 47 elementary, primary and secondary schools in Madrid (Spain). The official Spanish educational system (ranging from 3 to 16 years old students) is composed of these three levels of compulsory schooling: elementary, primary and secondary levels. In our sample, 51.4% worked at Elementary and Primary School levels and 48.6% at Secondary School Level. Additionally, Spanish educative centres can have private ownership (74.7% of our teachers) or public entitlement (25.3%). Average teacher age was 40.5 years (SD = 10.87); 71.6% of the participants were women and 28.4% men.

Measurements

In the following paragraphs, we describe each variable included in this study and the instruments used to measure them.

(1) Job demands

Our study included three situations that literature describes as typically stressful for teachers:

- Situation 1. Challenging behaviour from students (disruptive behaviours in the classroom, disobedience, not doing homework, etc.)

- Situation 2. Work overload and lack of time (to have too much work and the perception of the impossibility to finish it: classes, exams corrections, family interviews, administrative tasks, etc.)
- Situation 3. Role conflict and ambiguity (for instance, teacher unsure whether to fulfil the programme of the subject or to solve disciplinary situations in class).

We included a brief description of each situation in the questionnaire so as to bring teachers cognitively close to the real demanding situations they were being asked about.

In order to assess the demand level of each situation, teachers were asked 'To what extent is this situation a source of tension for you?' with an answer scale from 1 = *None* to 6 = *Much.*

(2) Perceived self-efficacy

According to Bandura's definition, self-efficacy is the 'belief in one's capabilities to organise and execute courses of action required to produce certain achievements or results' (Bandura, 1997, p. 3). This variable was included in order to know the efficacy expectation of coping with each stressful situation. It was assessed asking teachers after each demanding situation: 'When you find yourself in this situation, to what extent do you think you will be able to cope with it successfully?' with an answer scale from 1 = *None* to 6 = *Much*.

(3) Personal coping resources

According to the objectives of this study, we assessed two types of personal coping resources (a) cognitive and (b) behavioural. After describing each demanding situation, teachers were asked 'What do you think when you find yourself in this situation?' followed by the cognitive coping items; and 'How do you act when you find yourself in this situation?' followed by the behavioural coping items. In this way, we tried to give greater validity to the assessment of personal coping resources. The items were obtained from the Brief COPE (Carver, 1997), translated into Spanish by Perczek, Carver, Price, and Pozo-Kaderman (2000), from the Cognitive Emotion Regulation Questionnaire (CERQ) (Garnefski, Kraaij, & Spinhoven, 2002), and creating new ones ad hoc. The items of the Brief COPE and CERQ were selected on the basis of their factor weights and their theoretical validity. We decided to create new items because of the scarcity of instruments for assessing cognitive coping in detail (e.g. certain cognitive distortions activated by stressful situations), as well as some aspects of behavioural coping considered relevant to coping with stress, like assertiveness. Thus, a 27-item Scale of Cognitive Coping Resources and a 40-item Scale of Behavioural Coping Resources were created.

Each item in both scales evaluated the extent to which the teacher had that particular reaction when confronted with the demanding Situation 1 (challenging behaviour), Situation 2 (overload) and Situation 3 (role conflict and ambiguity), with six possible answers from 1 = *None* to 6 = *Much*.

Factorial validity and reliability analysis were carried out in a previous research work (Bermejo-Toro, 2012). We summarise some of the most important results of this validation process. The exploratory factor analysis of the strategies included in

the cognitive coping resources scale revealed a two-factor structure: the first factor, called *Reactive Cognitive Coping Style*, included the strategies of pessimistic passivity and obsessive self-reference, which explained a 28.88% of the total variance and obtained a Cronbach's Alpha reliability of .83. The second factor, called *Proactive Cognitive Coping Style,* included the strategies of positive re-interpretation and rational planning and explained 26.45% of the total variance. This factor showed a reliability of .80. Together, both factors account for 55.32% of the total variance of the cognitive coping resources scale.

The exploratory factor analysis of the behavioural coping resources scale also revealed a two-factor structure: a first factor called *Reactive Behavioural Coping Style*, including the strategies of aggressiveness and passivity-avoidance, which explained 19.78% of the total variance and obtained a Cronbach's Alpha reliability of .77. The second factor called *Proactive Behavioural Coping Style* included the strategies of assertiveness, searching for social support and rational problem solving. This second factor explained 27.27% of the total variance and obtained a reliability of .84. Together, both factors accounted for 47.05% of the total variance of the behavioural coping resources scale.

(4) Job resources

(a) *Autonomy or control* at work was measured using specific indicators of control over task and time recommended by Jackson, Wall, Martin, and Davids (1993). The scale includes five items such as: 'How much autonomy do you have when it comes to deciding the tasks you will do every day at work?' There was a five-point answer scale, from 1 = *None* to 5 = *Much*. The Cronbach's Alpha reliability obtained was .89.

(b) *Feedback* received at work was measured with the four-item scale of Hackman and Oldham (1975), for example, 'My position offers many opportunities to know how well I am doing my job'. There was a seven-point answer scale, from 1 = *Totally disagree* to 7 = *Totally agree*. In this study, the reliability obtained for this scale was .55. If item 6 ('Parents frequently tell me what they think of my work') is discarded, reliability increases to .56, subsequently this item was not taken into consideration in the statistical analysis. We considered the possibility of not including this scale in our further analysis given its low reliability. However, we finally decided to include it because this reliability value is similar to that obtained by other authors (.65, Salanova & Schaufeli, 2008), and some experts (e.g. George & Mallery, 2003) provide the following rules of thumb: '>.9: Excellent, >.8: Good, >.7: Acceptable, >.6: Questionable, >.5: Poor and <.5: Unacceptable' (p. 231). On the other hand, there are some authors who suggest to consider other criteria besides Cronbach's Alpha to take such a relevant decision. We followed the recommendations of Elosua and Zumbo (2008) and Sijtsma (2009), and considered the theoretical relevance of this variable. Empirical literature about occupational health consider feedback as one of the most important factors related to professional well-being (Hakanen et al., 2006; Korunka, Kubicek, Schaufeli, & Hoonakker, 2009; Schaufeli & Bakker, 2004; Xanthopoulou et al., 2007), so we decided to include this variable in our results. As a consequence, careful interpretation of the results was required.

(c) *Variety at work* was assessed by means of a brief scale of three reverse-worded items, i.e. they define routine work. For example: 'In my work I repeatedly do the same things'. Participants were asked to indicate the extent to which the items described their job, using a five-point answer scale (from $1 = $ *It absolutely does not describe it* to $5 = $ *It describes it perfectly*). This scale was created and validated by Salanova and Schaufeli (2008). The Cronbach's Alpha reliability was .79.

(d) *Social support* was assessed with Winefield's multidimensional support scale (Winefield, Winefield, & Tiggemann, 1992) using its Section B – six items on support from colleagues and Section C – six items on support from supervisors. The scale includes items such as: 'How often did they answer your questions or provide advice on your problems?', 'How often did they really listen when you talked about your problems?' The support frequency was assessed using a four-point scale from $1 = $ *never* to $4 = $ *always.* Reliability was high, both in Section B (social support from colleagues, $\alpha = .89$) and in Section C (social support from the school administration team, $\alpha = .94$).

(5) Burnout

Exhaustion and *Cynicism*, the two central dimensions of burnout, were selected. They were evaluated with the Spanish version of Maslach Burnout Inventory-General Survey (MBI-GS) (Schaufeli, Leiter, Maslach, & Jackson, 1996), found in Salanova, Schaufeli, Llorens, Peiró and Grau (2000). The exhaustion scale includes five items (e.g. 'I am emotionally exhausted by my work') and the cynicism scale includes four items (e.g. 'I have lost interest in my work since I began this job'). The items are evaluated with a Likert scale from 0 (*never*) to 6 (*always*). Reliability was high in both subscales: exhaustion ($\alpha = .89$) and cynicism ($\alpha = .83$).

(6) Work engagement

The *Vigour* and *Dedication* dimensions were measured with the Spanish version of the Utrecht Work Engagement Scale (UWES) by Schaufeli and Bakker (2003), found in Salanova et al. (2000). Vigour includes six items (e.g. 'In my work, I feel full of energy') and dedication includes five items (e.g. 'My work is challenging'). Answers are provided with Likert-type scale from 0 (*never*) to 6 (*always)*. The reliability obtained was sufficient (Vigour, $\alpha = .79$; Dedication, $\alpha = .84$).

Procedure

Authors sent a letter by e-mail explaining the objectives of the study to the school principals inviting them to participate. Some schools invited a member of the research team to do a brief presentation of the questionnaire and motivate teachers to participate. The questionnaires were completed anonymously and voluntarily. Both the participants and data collected in this study were treated according to the ethical principles of scientific research.

Statistical analysis

First, the SPSS 15.0 application was used to conduct the descriptive and correlation analyses. Then, in order to test the hypotheses, structural equation models (SEM) were analysed using robust methods and the programme EQS 6.0.

Following Ruiz, Brown, and San Martin (2010), the normed Chi-square (X^2/df) has to be smaller than 3 for the model to be considered to have a good fit. As for the other fit indices, there is some disagreement on the exact value they must have to consider the model to be correct. Ruiz et al. (2010) report that the CFI, the NFI, the GFI and the AGFI should equal or be above .95, whereas other authors like Byrne (2001) or Hair, Anderson, Tatham, and Balck (1999) indicate that incremental fit indices must show values from .90 onwards to be considered good. The same happens with the SRMR and RMSEA fit indicators pertaining to the residuals. Ruiz et al. (2010) consider that RMSEA indicates good fit only if it takes values below .08, whereas other authors suggest that its value must be close to .05. In any case, Browne and Cudeck (1993) consider that models with a RMSEA higher than .10 should not be accepted as valid. We followed the criteria offered by Byrne (2001), Hair et al. (1999) and Browne and Cudeck (1993) related to the goodness of the fit indices.

Results

There were no significant differences in most variables of the SEM model (demands, self-efficacy, coping strategies or job resources) depending on teaching level (elementary, primary or secondary school). In those that we found significant differences (burnout and engagement), the effect size was very low (Eta squared = .05 and .04, respectively), hence that differences were considered not relevant. Therefore, we decided to treat teachers from primary or secondary school as one group.

Table 1 shows means, standard deviations and correlations between the variables included in the model; Figure 2 shows the estimated results of the initially suggested model; and Table 2 shows the main fit indices.

Taking into account the goodness of fit indices of the initial teacher well-being model (Table 2), the model would be considered acceptable. Besides, the relations (*paths*) between the variables included in the model are significant and they go in the direction predicted by the theory (Figure 2). The conceptual model postulated seems to offer a plausible explanation of the relations observed between variables and constructs. Thus, even though the model does not show a perfect empirical fit, it offers plausible results from the point of view of substantive theory.

However, doing research with SEMs frequently involves testing possible alternative models that could provide a better fit than the initially suggested model. Therefore, we considered a re-specified model by introducing two main modifications to the initial one:

(a) The elimination of some paths that turned out to be less significant than anticipated in the initial model in order to simplify it by adopting two possible main ways of influence on teacher well-being: one way called 'negative' from demands to burnout and engagement modulated by reactive coping, and another way 'positive' from demands to engagement and burnout modulated by self-efficacy and proactive coping.

Table 1. Means, standard deviations and correlation matrix of the variables of the teacher well-being model.

	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.
1. DEMAND 3	3.35	1.161	–																	
2. SELF-EFFI 3	4.45	.878	-.362**	–																
3. DEMAND 1	4.07	1.171	.247**	-.154**	–															
4. SELF-EFFI 1	4.26	.927	-.080	.368**	-.219**	–														
5. DEMAND 2	4.06	1.239	.339**	-.094	.298**	.016	–													
6. SELF-EFFI 2	4.71	.896	-.156**	.360**	-.035	.255**	-.153**	–												
7. AUTON	4.09	.823	-.173**	.138**	-.003	.009	-.185**	.149**	–											
8. FEED	4.26	.813	-.113*	.172**	-.194**	.190**	-.090	.197**	.007	–										
9. VARIETY	3.61	.959	-.061	.107*	-.110*	.169**	-.005	.107**	.060	.275**	–									
10. COLLSUPP	3.09	.626	-.64	.070	-.031	.086	-.011	.122*	.131**	.283**	.126**	–								
11. ADMINSUPP	2.62	.809	-.112*	.062	-.028	.068	-.193**	.149**	.150**	.310**	.131**	.428 **	–							
12. EXHAUST	1.90	1.286	.257**	-.185**	.260**	-.139**	.372**	-.172**	-.121*	-.208**	-.131**	-.237**	-.247**	–						
13. CYNICIS	1.11	1.124	.177**	-.146**	.168**	-.150**	.179**	-.160**	-.015	-.219**	-.240**	-.272**	-.186**	.629**	–					
14. VIGOUR	4.32	.914	-.140**	.263**	-.143**	.253**	-.135**	.260**	.169**	.224**	.228**	.211**	.166**	-.420**	-.473**	–				
15. DEDIC	4.70	.961	-.153**	.242**	-.180**	.204**	-.141**	.240**	.115*	.286**	.23**	.209**	.117*	-.407**	-.570**	.737**	–			
16. REACCOG	2.45	.717	.289**	-.229**	.350**	-.260**	.361**	-.226**	-.089	-.163**	-.157**	-.153**	-.173**	.531**	.453**	-.322**	-.285**	–		
17. REACBEH	2.20	.619	.125*	-.124*	.150**	-.171**	.034	-.140**	-.094	-.172**	-.164**	-.206**	-.050	.250**	.303**	-.190**	-.141**	.593**	–	
18. PROACOG	4.18	.622	-.172**	.328**	-.060	.208**	-.133**	.284**	.150**	.177**	.101**	.010	.072	-.213**	-.192**	.305**	.309***	.023	.076	–
19. PROABEH	3.97	.644	-.066	.194**	.065	.205**	-.003	.164**	.064	.151**	.062**	.100*	.157**	-.119*	-.138***	.236**	.195**	.100*	.126*	.617**

**The correlation is significant at level .01 (bilateral).
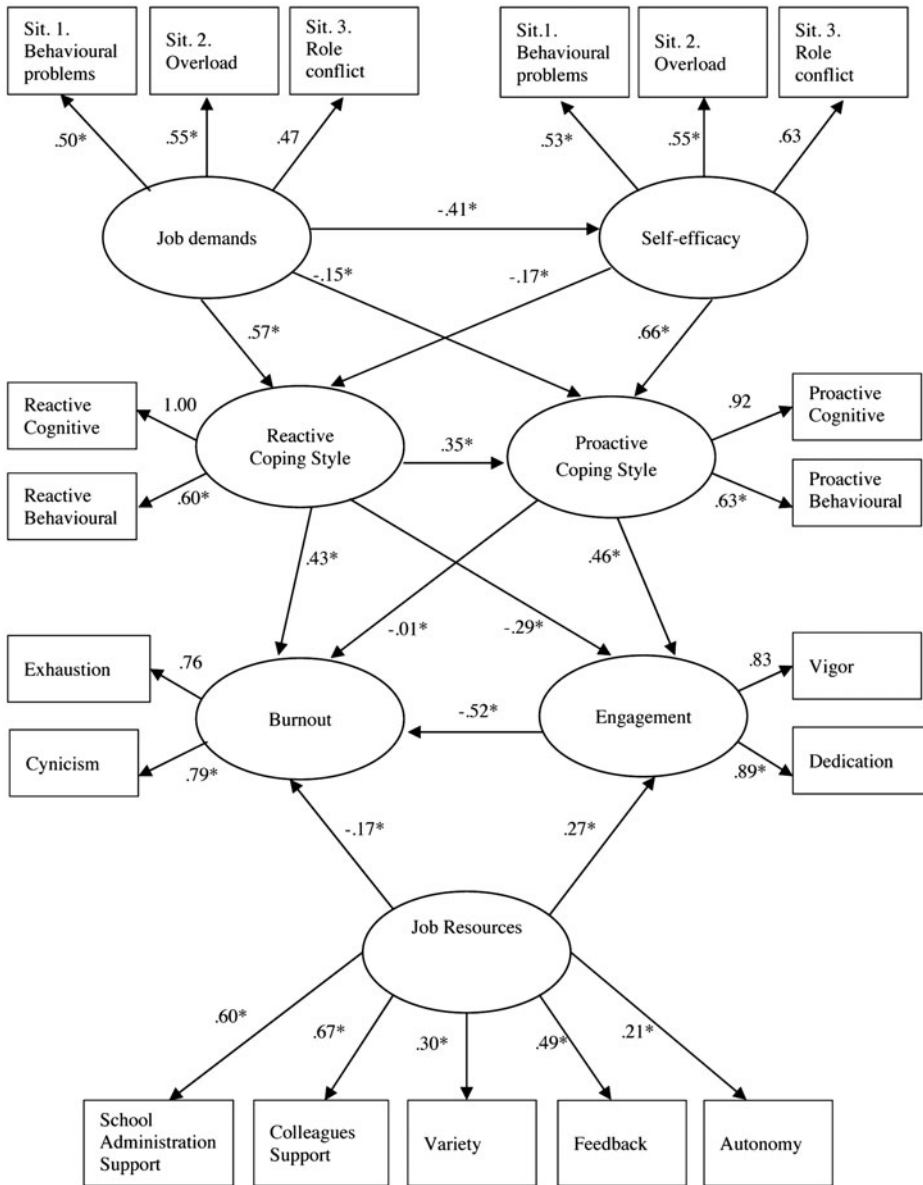*The correlation is significant at level .05 (bilateral).

Figure 2. Initial structural equations model of demands, personal resources and job resources in teacher well-being.

(b) A reduction of the number of indicators of the latent variable *Job resources*. We chose the most significant ones and those related to social resources in order to have a more homogenous variable. Besides, empirical literature about occupational health consider social support and feedback as some of the most important factors related to professional well-being, as pointed out above.

Table 2.   Goodness of fit indices in the estimation of the initial and re-specified teacher well-being model.

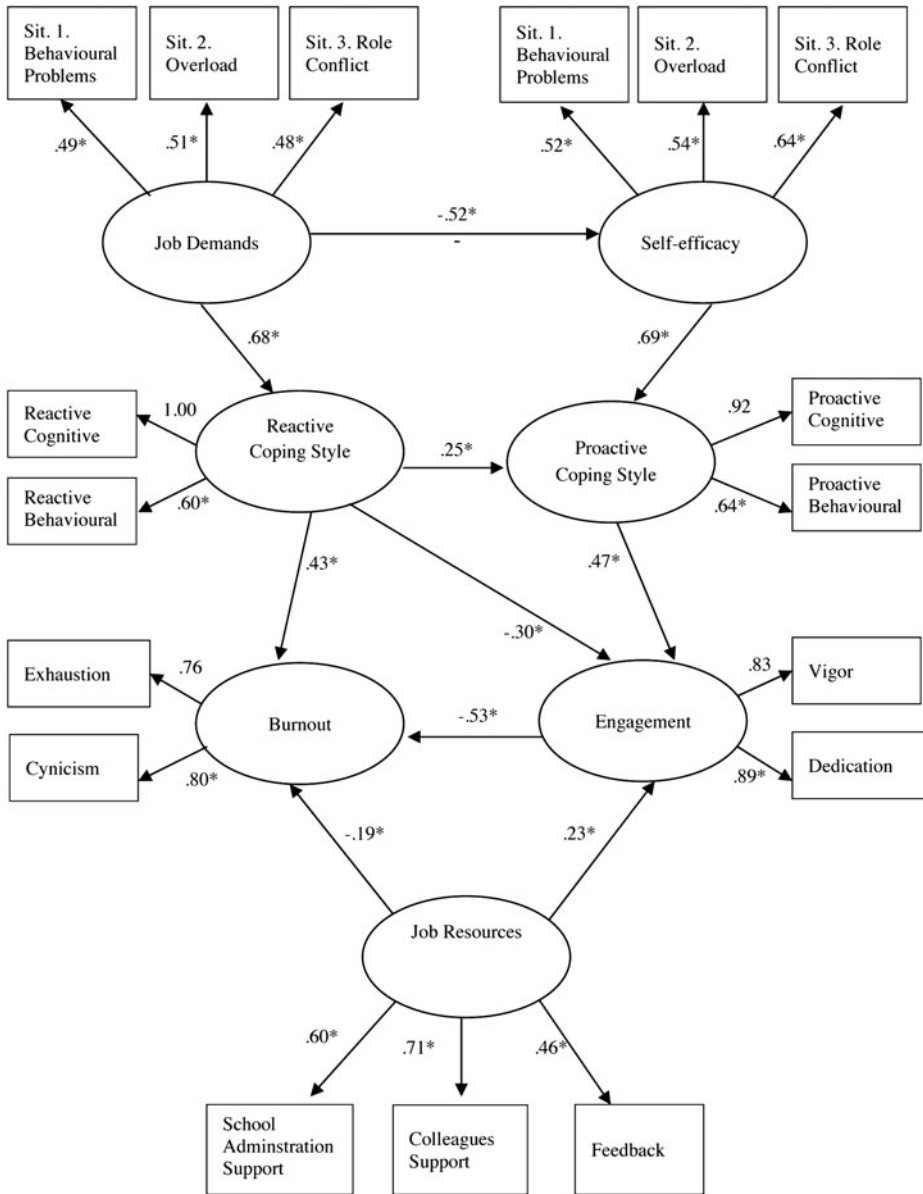| Goodness of fit indices	N	X^2 (p)	DF	X^2/DF	CFI	NFI	NNFI	GFI Lisrel	AGFI Lisrel	SRMR	RMSEA
Initial model	413	396.56 $p = .00$	139	2.85	.87	.81	.84	.90	.86	.09	.07
Re-specified model	413	319.66 $p = .00$	110	2.90	.94	.92	.93	.91	.87	.08	.07

Figure 3. Re-specified structural equations model of demands, personal resources and job resources in teacher well-being.

Hence, a re-specified teacher well-being model was considered following the above mentioned theoretical arguments and statistical recommendations. These recommendations, taken from Lagrange and Wald tests' guidelines, allowed us to verify whether significant changes took place, either in the fit indices or in the estimated parameters. The teacher well-being re-specified structural model and its fit indices can be observed in Figure 3 and Table 2.

Table 2 shows that most fit indices improved in the re-specified model in comparison to the initial model. The teacher well-being model shows a better fit, if job resources are limited to those of a more social nature (social support and feedback); when demands are considered to affect essentially the reactive – not the proactive – coping strategies and self-efficacy is considered to affect the proactive – not the reactive – strategies, and when the effect of proactive strategies on burnout is eliminated.

Discussion

To summarise, the results obtained in both the initial and re-specified teacher well-being models provide reasonable empirical evidence supporting the suggested conceptual model.

More specifically, as expected, both personal and job resources have shown a significant relation to both teacher well-being indicators: burnout and engagement. In addition, paths obtained moderate to high values. Perceived self-efficacy and personal coping resources modulate the effect of demands on teacher well-being (burnout and engagement), in line with self-efficacy in the research of Vera et al. (2012). These results show that personal resources (self-efficacy and coping skills) have much importance, even more than job resources in teacher well-being. It would be consequently interesting to continue studying their role in burnout and engagement.

Reactive strategies have a direct, significant, positive and moderate effect over proactive strategies when they are influenced by tension and self-efficacy. Reactive strategies have also a mediator effect between tension and self-efficacy – mainly tension – and proactive strategies. This means that a higher level of tension when facing demands may increase reactive strategies among teachers, which in turn may activate proactive strategies. These results could point out that teachers do not use only one of the coping strategies proposed in this research; on the contrary, when they experience more activation, they immediately commence reactive strategies and this may also activate a certain 'dose' of proactive strategies, probably because the first ones are not enough to cope with the demands. Previous works have shown that teachers sometimes may apply palliative coping strategies –which are similar to those we named reactive strategies – that can be useful in the short term to reduce pressures and burnout (Blanch, Aluja & Biscarri, 2003; Parker & Martin, 2009). Otherwise, direct coping strategies such us planning or mastery orientation – proactive strategies – are better than palliative strategies to predict teacher well-being and engagement (Parker & Martin, 2009).

According to this, it is very interesting to point out that reactive strategies have a greater and positive effect on burnout – of a magnitude from moderate to high, whereas their influence on engagement has been negative and of a quite lower magnitude. On the other hand, proactive strategies have actually a moderate effect on engagement and very little on burnout. Furthermore, job resources are negatively related to burnout and positively related to engagement. These results are extremely interesting, especially for all interested in clinical management of burnout; the interventions proposed until now do not usually consider that different objectives (to reduce burnout and to improve engagement) need different technical approaches. Our results show that in order to increase teacher engagement we should train proactive skills. On the other hand, if we want to reduce burnout this approach will be of

little use: we should reduce or avoid reactive coping behaviours. The facilitation of feedback and social support would be useful for both objectives.

Another interesting result is the negative, moderate to strong direct effect that engagement shows on burnout. Moreover, engagement has acted as a modulator between the different previous variables and burnout. Its mediator role between self-efficacy and burnout using proactive strategies is to be stressed; as well as between personal coping resources (reactive and proactive) and burnout; and between job resources and burnout. Being engaged as a teacher, besides being positive itself, can also act as a protective factor against the burnout syndrome. Our study is one of the few that presents this kind of relation between burnout and engagement. The direct effect that engagement plays on burnout leads us to think that, although increased engagement does not have a direct reduction effect on burnout levels (as we have pointed out above), it may have a preventive function on burnout problems.

It can then be claimed, in relation to the objective specified, that there is a line of influence beginning with the level of perceived demands and the perceived self-efficacy in relation to those demands. Modulated by personal coping resources (proactive and reactive), it contributes to the generation of a certain level of teacher well-being (burnout and engagement), also affected by the job resources that teachers have access to. At the same time, engagement has an important effect on burnout levels, both directly and acting as a mediator between the other variables suggested and burnout.

Practical implications and future research

The results of this study show that, in order to improve well-being at work, it is necessary to promote personal variables such as self-efficacy and appropriate positive coping styles, as other studies have already began to point out (Demerouti & Bakker, 2011; Mark & Smith, 2010). Demerouti and Bakker (2011) suggest that, due to the current financial situation and limited availability of job resources, it could be particularly important for teachers, and generally for employees, to mobilise their own resources – such as self-efficacy and a proactive attitude. Proactive coping strategies not only contribute to effectively decrease the demands or the negative assessment associated to them, but they also prevent future difficulties. It contributes to preserving teacher resources, which are enhanced and supported rather than getting exhausted; thus, generating greater engagement than reactive, passive or avoidance strategies that have a negative connection to teacher well-being.

The results show that future research on teacher well-being at work could benefit from an approach focused on intervention. The shortage of studies that explicitly test interventions designed to alleviate the burnout syndrome and enhance engagement is indeed a disappointing aspect of the abundant research carried out on work well-being. The research literature is fundamentally based on cross-sectional studies showing the variables that correlate with burnout or engagement, but there are very few studies showing planned changes, in other words, studies with an experimental design. A relevant contribution would come from systematic studies that assess the impact on engagement of new school administration procedures (with more support, feedback, etc. to teachers) or individual routines (such as a more assertive attitude).

Likewise, the results found in this research are interesting in order to design training programmes for teachers. It is important that these programmes include training on positive and proactive coping resources which could protect teachers

from work stress and contribute to creating a healthier school atmosphere. Likewise, an increase in teacher well-being is a very relevant factor in attaining educational goals both in the classroom and at the school community level (Soini, Pyhalto, & Pietarinen, 2010).

Limitations and strengths of the study

First of all, it is important to emphasise that the sample limitation makes it difficult to generalise the results and conclusions of this study. In particular, in our sample, there is an over-representation of teachers who work in private ownership schools, and this population shows usually, in Spain, lower levels of burnout than those who work in public schools (Rodríguez Mantilla & Fernández Diaz, 2012; Viloria, Paredes, & Paredes, 2003); moreover, the engagement level of our teacher sample is higher than the level found in validation samples (Schaufeli & Bakker, 2003). Consequently, results have to be interpreted in the context of an 'overengaged' sample, and it would be interesting to test the model using other teacher samples in the future.

Secondly, possible distortions or sources of error could arise from self-reporting assessment instruments. In order to avoid them, we included questions about how teachers think or act in problem situations from real life.

Third, the type of design used in this study, cross-sectional and quasi-experimental, does not allow for direct cause-effect relations to be established. Nevertheless, the use of a complex multivariate technique, structural equation modelling, allows us to simultaneously study a set of complex relations between variables, providing a more holistic vision of the variables involved in the teacher well-being process.

To conclude, in spite of the limitations mentioned, we consider that the study has several strengths that give high validity to its conclusions: the inclusion of personal and trainable variables in a model of teacher well-being at work; the fact that these personal variables (self-efficacy and coping) have been evaluated in relation to specific work situations of teachers; and finally the fact that diverse coping strategies have been evaluated –behavioural as well as cognitive, and positive and proactive as well as negative and reactive. The direct applicability of our results makes our study particularly interesting for clinical interventions and practitioners.

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