

BURNOUT SYNDROME AND STRESSORS IN DIFFERENT STAGES OF TEACHERS' PROFESSIONAL DEVELOPMENT: THE MEDIATING ROLE OF COPING STRATEGIES

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Abstract: The aim of the present study was to investigate the potential burnout syndrome and its relations with stressors such as job demands in different stages of teachers' professional development. Further, the study aimed at determining the mediating role of coping strategies in the relationship between job demands and dimensions of burnout. Participants were 1447 pre-primary, primary and secondary school teachers. They completed the "Ways of Coping Questionnaire" (Lazarus & Folkman, 1984), the "Maslach Burnout Inventory" (Maslach & Jackson, 1986) and the "Teachers' Professional Stress Questionnaire" (Μούζουρα, 2005). The results of the study revealed changes in the three burnout dimensions across the different stages of teachers' professional development. Specifically, teachers appear to be moving from lower (novice and advanced beginner stage) to higher scores (expert stage) in emotional exhaustion, whereas teachers at the competent stage (4-5 years of teaching experience) reported the highest score in depersonalization and the lowest score in personal accomplishment. The results also showed that "workload and time pressure" as well as "problems related to students' behavior" were the most prevalent job demands that predicted the three burnout dimensions. Moreover, emotion-focused coping strategies acted as partial mediators in the relation between job demands and burnout dimensions, such as emotional exhaustion and depersonalization.

Key words: Burnout, Job demands, Professional development, Teachers

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INTRODUCTION

Burnout has been recognized as a widespread problem for different occupations and has received a great deal of research attention (Chan, 2003; Maslach, 1982; Maslach & Jackson, 1986). Several studies have recognized the importance of burnout in education, and particularly in the teaching profession (Brouwers & Tomis, 2000; Farber, 2000; Garish & Friedman, 2010). These studies demonstrated that teachers face job demands, such as high workload and time pressure, problems with students' learning and students' behavior, staff conflicts, lack of autonomy and self-motivation (Antoniou, Polychroni, & Vlachaki, 2006; Austin, Shah, & Muncer, 2005; Olivier & Williams, 2005; Shonfeld, 2001). While these demands have consistently appeared in the teacher stress literature for over 30 years (Kyriakou, 2000), it is commonly accepted that in the last decade teaching has become more demanding than ever before (Esteve, 2000; Kaspereen, 2012).

Burnout in teachers

Burnout is conceptualized as a work-related syndrome stemming from the individual's perception of a significant gap between expectations of successful professional performance and an observed, far less satisfying reality (Friedman, 2000). Burnout is a response to stress at work and is characterized by negative attitudes and feelings toward the people with whom one works (depersonalization) and toward the profession itself (lack of personal fulfillment at work) along with a feeling of being emotionally exhausted (Maslach & Jackson, 1986). More specifically, *emotional exhaustion* refers to feelings of being emotionally overwhelmed and depleted of one's emotional resources. *Depersonalization* refers to a negative, callous and detached attitude towards people one works with (e.g., students). *Reduced personal accomplishment* is described as a person's negative self-evaluation in relation to his or her job performance (Maslach & Jackson, 1986).

Burnout can begin in any phase of the teaching career but is most often seen within the first three to five years after initial teacher induction (Yaghaubi & Habibineja, 2015). Three major predictors of teacher burnout have been identified in the literature: (a) lack of professional recognition and appreciation by students, (b) lack of appreciation and professional recognition by the public and (c) lack of collaborative and supportive professional environment, which has been linked to the school's support culture (Garish & Friedman, 2010). Teachers may also experience burnout as result of job demands themselves, a sudden break down, or inefficiency of their coping strategies over a long period of time (Montgomery & Rupp, 2005; Vandenberghe & Huberman, 1999).

Research has shown that job demands have a profound influence on burnout (Xanthopoulou, Bakker, Dollard, Demerouti, Shaufeli, Taris, & Schreurs, 2007. See also Antoniou, Ploumpi, & Ntalla, 2013; Kamtsios & Lolis, 2016; Vassilopoulos, 2012). However, in the Greek context research showed that Greek teachers experience lower levels of burnout than their colleagues in other countries (Kokkinos, Panayiotou, & Davazoglou, 2005; Koustelios & Tsigilis, 2005; Platsidou & Agaliotis, 2008). However, more recent research revealed that teacher stress is a risk factor for teachers' social and emotional well-being (Flook, Goldberg, Pingel, Bonus, & Davidson, 2013) and addressing teacher stress remains a significant challenge in education (Flook et al., 2013). Specifically, recent research suggested that Greek teachers, in the light of the current financial crisis in Greece (Μπάμπαλου, 2016), reported high levels of professional burnout (Κάμτσιος & Λώλης, 2016). Furthermore, Κάμτσιος and Λώλης (2016), using a person-oriented approach, showed that Greek teachers are at risk for burnout due to the increased and excessive job demands.

Teacher burnout is often explained using the job demands-resources model (Demerouti & Bakker, 2011). In this model job demands refer to those physical, social and organizational aspects of the job that require sustained physical or mental effort and are therefore associated with physiological and psychological cost (Demerouti, Bakker, Nachreiner, & Shaufeli, 2001). Job resources refer to those physical, psychological, social, or organizational aspects of the job that may be functional in achieving one's work-related goals. They reduce job demands and the associated physiological or psychological cost and stimulate personal growth and development.

In agreement with the job demands-recourses model (Demerouti & Bakker, 2011) the development of teachers' burnout is assumed to follow two routes. In the first route, demanding aspects of work at school lead to constant overtaxing of teachers' resources (external and internal) and exhaustion. In the second route, lack of recourses constrains one's meeting the job demands, which further leads to withdrawal behavior. The long-term consequence of this withdrawal is disengagement from work (Demerouti & Bakker, 2011). Viewed from this perspective, teacher burnout, if it occurs, should rightly be a great concern, as it might impair the quality of teaching as well as lead to job dissatisfaction, work alienation, physical and emotional ill-health, and teachers leaving the profession (Chan, 2003).

Teacher burnout and coping

One of the individual differences factors noted to affect teacher burnout levels is coping strategies (Shin et al., 2014). Coping refers to "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are

appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984, p. 141). According to Lazarus and Folkman (1984) and their transactional model of stress and coping, coping strategies used by teachers are distinguished between problem-focused (approach process) and emotion-focused (avoidance process) coping strategies. The function of problem-focused coping involves strategies that attempt to change the stressful situation and remove its effects. Such strategies include confrontive coping, seeking social support, and problem solving. Emotion-focused coping has been conceptualized as attempting to withdraw from a stressful event without dealing directly with the problem. It involves use of cognitive activities that reduce, or remove, the effects of stress and involve regulating of emotions. Escape/avoidance and wishful thinking are emotion-focused coping strategies.

Research has shown that both problem- and emotion-coping strategies might play an important role in burnout, increasing or decreasing psychological burnout (Shin et al., 2014), or acting as mediators, as burnout is a progressively developing condition arising from the use of ineffective coping strategies (Lazarus, 1993). More specifically, empirical studies have pointed out that problem-focused coping strategies correlate negatively with the three dimensions of burnout syndrome, whereas emotional exhaustion and depersonalization correlate more strongly with emotion-focused coping (Ben-Zur & Michael, 2007; Rothman, 2004; Shin et al., 2014). Furthermore, previous research suggested that coping resources may mediate the relationship between specific job/work place characteristics and job-related demands and psychological burnout (Prati, Pietrantonio, & Cicognani, 2011).

Because of the application of such coping mechanisms teachers may experience a host of emotional responses which are either positively or negatively oriented (Montgomery & Rupp, 2005). In addition, teachers may experience strong feelings of satisfaction or dissatisfaction with their job, which may influence their commitment to their work (Montgomery & Rupp, 2005).

Teacher professional development and burnout

As already mentioned, various factors contribute to the level and intensity of teachers’ psychological burnout, such as personal resources or personality moderators (Chan, 2003) (e.g., work overload, time pressure), organizational characteristics (e.g., role ambiguity) and background person characteristics (e.g., age, gender). These factors act differentially so that teachers show marked individual differences in their reactions to different stressors in the teaching profession (Kamtsios & Lolis, 2016). Teaching experience is an important factor that plays a prominent role in the intensity and types of job demands, but also in the coping strategies used and teachers’ burnout.

Years of teaching is an indicator of teaching experience that has been linked to the experience of job demands. Two levels of teaching experience are usually distinguished: novice or expert. However, the characterization of teachers as novice or experts is a rather simplistic distinction (Okas, Schaat, & Krull, 2014). According to Berliner's model of teacher professional development (Baron, Berliner, & Blanchard, 1996; Berliner, 1994), teachers move across five different stages, before a teacher reaches expert stage: the novice stage, the advanced beginner stage, the competent stage, the proficient stage and the expert stage. Teachers in these stages differ in professional skills. Teacher development towards becoming an expert in one's field is a long-term process characterized by qualitative changes in teaching skills (Okas et al., 2014) as well as changes in personal characteristics and changes in the way one perceives everyday events and job demands that occur in daily school life.

Given that research from many countries suggests concern about teacher burnout (Aloe, Amo, & Shanahan, 2014) and the fact that burnout is linked to different stages of teachers' career, affecting many aspects of their profession and their willingness to continue in the field (Aloe et al., 2014; Ferguson, Frost, & Hall, 2012), the aim of this study was to identify differences in burnout dimensions, job demands and coping strategies in the various stages of teachers' professional development. Furthermore, the study aimed at investigating whether specific job demands significantly predicted burnout dimensions and whether coping strategies mediated the relation between teacher job demands and teacher burnout dimensions. The theoretical mediation model is given in Figure 1.

METHOD

Participants

The overall sample ($N = 1447$) consisted of 64.8% female ($n = 939$) and 35.1% male ($n = 508$) teachers who taught various subjects (e.g., math, ancient Greek, chemistry, physical education, English as foreign language etc.) in primary (47.41% of the sample) and secondary education (44.02% of the sample) state schools. Some of the teachers (mainly women) taught in kindergarten schools (8.57% of the sample). The mean age of the participants was 43.40 ($SD = 7.97$), 74.8% of the sample was married, and the mean years of teaching experience was 15.84 ($SD = 8.12$).

The categorization of participants into five groups depending on the different stages of career development (see Berliner, 1994) was as follows. There were 84 (5.82%) teachers in the novice stage, 88 (6.08%) in the advanced beginner stage, 92

(6.35%) in the competent stage, 353 (24.39%) in the proficient stage and 830 (57.36%) in the expert stage.

Measures

Ways of Coping Questionnaire

The Ways of Coping Questionnaire (Lazarus & Folkman, 1984), as adapted to the Greek population (Καραδήμας, 1998), was used. The Greek version of the questionnaire consists of 38 items covering a broad range of cognitive and behavioral strategies used to deal with a stressful situation. The participants were asked to respond on a four-point Likert-type scale (ranging from 0 = does not apply/not used to 3 = used a great deal) how frequently they used the strategy depicted in each item regarding the difficulties they met during the last month in the school environment. The overall scale consists of five subscales. These subscales are: (1) Confrontive coping (e.g., I expressed anger to the person(s) who caused the problem) (11 items; Cronbach's $\alpha = .81$); (2) Problem solving (e.g., I found two or three solutions for the problem) (4 items; Cronbach's $\alpha = .60$); (3) avoidance/denial (e.g., Tried to forget the whole thing) (9 items; Cronbach's $\alpha = .77$); (4) Wishful thinking (e.g., Wished that the situation would go away) (8 items; Cronbach's $\alpha = .76$), and (5) Seeking social support (e.g., Talked to someone who could do something concrete about the problem) (6 items; Cronbach's $\alpha = .72$). Conceptually, these subscales represent two underlying dimensions: problem-focused coping strategies (confrontive coping, problem solving, seeking social support) and emotion-focused coping styles (wishful thinking, avoidance/denial). This questionnaire has been used in previous studies in Greece and its factorial validity has been confirmed (Karademas, 2007; Karademas & Kalatzi-Azizi, 2004; Karademas, Karveli, & Argyropoulou, 2007; Papastavrou et al., 2011).

Maslach Burnout Inventory

The Maslach Burnout Inventory (MBI-ED version for teachers) (Maslach & Jackson, 1986) was used. This scale has been used before with Greek teaching populations (Antoniou, Polychroni, & Vlachaki, 2006; Kamtsios & Lolis, 2016; Kantas & Vassilaki, 1997; Kokkinos, 2000; Papastyliannou, Kaila, & Polychronopoulos, 2009). The scale consists of 22 items to which the participants respond how often they experience the state depicted in the item. Responses are on a 7-point Likert-type rating scale, ranging from 0 = never to 7 = every day. The three dimensions of

professional burnout assessed by MBI-ED are: Emotional exhaustion, personal accomplishment, and depersonalization. The nine items in the emotional exhaustion subscale describe feelings of being emotionally overwhelmed and exhausted by one's work (e.g., I feel emotionally drained from my work) (Cronbach's $\alpha = .87$). The five items in the depersonalization subscale describe an unfeeling and impersonal response towards recipients of one's care or service (e.g., I feel students blame me for some of their problems) (Cronbach's $\alpha = .72$). The subscale of personal accomplishment contains eight items that describe feelings of competence and successful achievement in one's work with people (e.g., I have accomplished many worthwhile things in this job) (Cronbach's $\alpha = .83$). For emotional exhaustion and depersonalization, high mean scores correspond to higher degrees of burnout. In contrast to the other two subscales, lower mean scores in personal accomplishment correspond to higher of burnout. Confirmatory factor analysis testing the 3-factor model showed that the model fit the data well, $\chi^2(206) = 2.771.24$, $p < .001$, CFI = .95, GFA = .94, RMSEA = .03 (LO = .02, HI = .05), SRMR = .04. All factor loadings were within acceptable range ($> .30$). Composite variables for emotional exhaustion, depersonalization and personal accomplishment were calculated by averaging the values of the completed items for further analyses.

Teachers' Professional Stress Questionnaire

The Teachers' Professional Stress Questionnaire (Μούζουρα, 2005) was used to measure teachers' job demands. The questionnaire comprises of 37 statements, assessing six professional job demands: (1) perspective and prestige of teaching profession (11 items; Cronbach's $\alpha = .88$) (e.g., low social recognition of the teaching profession, changes in educational policy); (2) workload and time pressure (7 items; Cronbach's $\alpha = .86$) (e.g., high workload, lack of time to complete the curriculum); (3) problems related to students' learning (6 items; Cronbach's $\alpha = .75$) (e.g., lack of knowledge for handling learning problems, teaching large numbers of students with different cognitive abilities); (4) administrative and organizational issues at school (6 items; Cronbach's $\alpha = .77$) (e.g., absence of teaching materials); (5) problems related to students' behavior (5 items; Cronbach's $\alpha = .77$) (e.g., lack of interest and motivation of students, problems of student behavior-disobedience, insolence), and (6) relationships between colleagues (2 items; Cronbach's $\alpha = .70$) (e.g., conflicts with colleagues or with the school manager, competition between colleagues). Responses are given on a five-point Likert-type scale, ranging from 1 = never to 5 = very much. A high score indicates that the aspect being assessed by the items is perceived as very stressful by the teachers. Confirmatory factor analysis of the 6-factor

model indicated acceptable model fit, $\chi^2(403) = 2.286.65$, $p < .001$, CFI = .93, GFI = .92, RMSEA = .04 (LO = .03, HI = .06), SRMR = .05. All factor loadings were within acceptable range ($> .30$). Composite variables were calculated by averaging the values of the completed items for further analyses.

Procedure

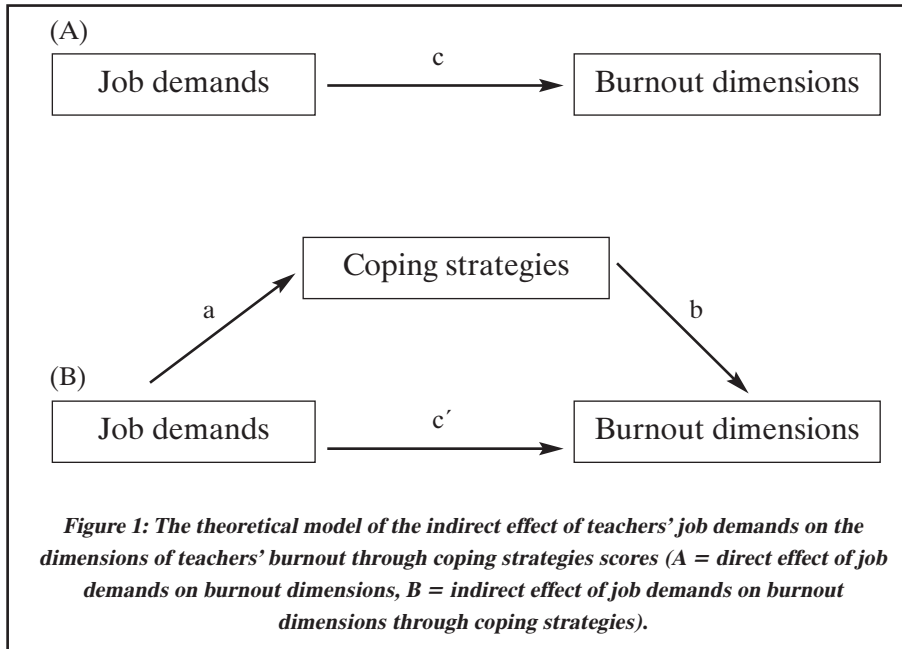
An electronic link, as a hyperlink to an electronic/web-survey, was mailed to the official web-mail address of each school (which was selected using a stratified random procedure) from every large Greek city and two rural areas from ten geographical regions of Greece. Teachers were asked to respond to the questionnaires by checking the response scales. At the beginning, a cover letter assured respondents on the importance of the research, solicited the interest of the respondents and reassured that participation was voluntary and confidential.

Statistical analyses

A series of multivariate analysis of variance (MAVOVA) was carried out to determine the effects of stages of teacher's professional development and teacher's gender on burn out dimensions, job demands and coping strategies, respectively. The partial eta squared was used as indicator of the effect size associated with each statistical difference.

Moreover, regression analyses were used to determine whether job demands significantly predicted burnout dimensions. To test the mediating role of problem- and emotion-focused coping strategies in the relation between job demands and burnout dimensions across the stages of teachers' career of professional development, the PROCESS, a versatile modeling tool for observed variable mediation (developed by Preacher & Hayes, 2008) was used. A procedure for assessing mediation by formulating 5,000 bootstrapped resamples to derive confidence intervals was tested. In this analysis, a bias-corrected and accelerated bootstrap confidence interval (BCa CLs) method that produces more accurate confidence intervals was used (Prati et al., 2011; Shrout & Bolger, 2002).

All mediation analyses followed the model illustrated in Figure 1. The *c* path refers to the direct relationship between the predictor and the outcome. The *a* and *b* paths show the associations between: (a) the predictor and the mediator and (b) the mediator and the dependent variable; the *c'* path, including the mediator in the equation, refers to the indirect effect of the independent to the dependent variable.



RESULTS

Professional development effects

Burnout

A 5 (professional development stages) by 2 (gender) by 3 (burnout dimensions: emotional exhaustion, depersonalization and personal accomplishment) indicated a nonsignificant multivariate effect, Wilks's $\lambda = .99$, $F(4, 1437) = .89$, $p = .54$, $\eta_p^2 = .002$, but a significant main effect of stages of professional development, Wilks's $\lambda = .95$, $F(4, 1437) = 5.16$, $p < .001$, $\eta_p^2 = .014$, on the three burnout dimensions. The univariate test regarding emotional exhaustion, $F(4, 1437) = 5.89$, $p < .001$, $\eta_p^2 = .016$, revealed that as teachers move through the years of teaching (from novice to expert stage), emotional exhaustion increased (see Table 1). Teachers at the proficient and expert stage reported the highest scores in emotional exhaustion ($M = 2.90$, $SD = .85$ and $M = 2.94$, $SD = .85$, respectively). Teachers' scores in depersonalization, $F(4, 1437) = 3.81$, $p = .017$, $\eta_p^2 = .008$, increased from novice to competent stage and decreased during the proficient and expert stage. The effect on personal accomplishment, $F(4, 1437) = 3.95$, $p = .003$, $\eta_p^2 = .011$, was also significant. There

were high scores in novice teachers ($M = 4.38$, $SD = .64$); scores decreased in the competent ($M = 4.09$, $SD = .71$) and proficient stage ($M = 4.16$, $SD = .72$) and increased again at the expert stage ($M = 4.37$, $SD = .75$). Post hoc comparisons (using the Bonferroni test) showed that there were only three statistically significant differences in relation to personal accomplishment; teachers in the competent stage scored lower than teachers in the proficient and expert stage ($p < .001$), teachers in the proficient stage scored lower than teachers in the expert stage ($p < .001$), whereas teachers in the novice stage scored higher than teachers in the competent stage ($p < .001$) (see Table 1).

Furthermore, the MANOVA showed a significant main effect of gender, Wilks's $\lambda = .99$, $F(1, 1437) = 4.29$, $p = .005$, $\eta_p^2 = .009$. Male teachers ($M = 2.2$, $SD = .097$) scored higher than their female counterparts ($M = 1.85$, $SD = .06$) in depersonalization, $F(1, 1437) = 9.42$, $p = .002$, $\eta_p^2 = .007$.

Job demands

Concerning job demands, the 5 (professional development stages) by 2 (gender) by 6 (dimensions of job demands) MANOVA revealed a nonsignificant multivariate effect, Wilks's $\lambda = .98$, $F(4, 1437) = .92$, $p = .57$, $\eta_p^2 = .004$. The main effect of stages of professional development on job demands was significant, Wilks's $\lambda = .95$, $F(4, 1437) = 2.60$, $p < .001$, $\eta_p^2 = .011$. Specifically, there was a significant univariate effect, $F(4, 1437) = 2.15$, $p = .05$, $\eta_p^2 = .006$, in the case of "perspective and prestige of teaching profession", with teachers at the expert stage having the highest score. The univariate effect in "administrative and organizational issues at school" was also significant, $F(4, 1437) = 2.60$, $p = .03$, $\eta_p^2 = .007$. There were differences between novice teachers ($M = 3.26$, $SD = .93$) and teachers at the proficient ($M = 3.57$, $SD = .78$) and expert ($M = 3.41$, $SD = .82$) stage; teachers at the proficient and expert stage had the highest scores. Furthermore, there was significant univariate effect in the "relationship between colleagues", $F(4, 1437) = 3.93$, $p = .003$, $\eta_p^2 = .011$. This aspect of job demands showed a nonlinear change of scores, that is, scores increased from novice stage to the advanced beginner stage, decreased in the competent stage, increased in the proficient stage and decreased in the expert stage (see Table 1). No significant univariate effects were found in "workload and time pressure", $F(4, 1437) = .272$, $p = .896$, $\eta_p^2 = .001$, in "problems related to students' learning", $F(4, 1437) = .992$, $p = .41$, $\eta_p^2 = .003$, and in "problems related to students' behavior", $F(4, 1437) = 1.73$, $p = .139$, $\eta_p^2 = .005$.

Moreover, there was a multivariate main effect of gender, Wilks's $\lambda = .99$, $F(1, 1437) = 2.45$, $p = .023$, $\eta_p^2 = .010$. However, the only significant univariate effect

Table 1. Differences in study variables across the different stages of teachers' career development

Variables	Professional development stage						F	p
	Novice (n = 84)	Advanced beginner (n = 88)	Competent (n = 92)	Proficient (n = 353)	Expert (n = 830)			
	M [SD]	M [SD]	M [SD]	M [SD]	M [SD]	M [SD]		
<i>Burnout dimensions</i>								
Emotional exhaustion	2.10 [.67] ^{1,2}	2.41 [.75] ^{3,4}	2.79 [.88]	2.90 [.85] ^{1,3}	2.94 [.85] ^{2,4}	7.11	< .001	
Depersonalization	1.70 [.59] ^{2,5}	1.95 [.81]	2.14 [.85] ^{5,7}	2.05 [.76] ⁶	1.93 [.75] ^{6,3,7}	3.18	.013	
Personal accomplishment	4.38 [.64] ⁵	4.33 [.90]	4.09 [.71] ^{6,5,7}	4.16 [.72] ⁶	4.37 [.75] ⁷	6.49	< .001	
<i>Stressors subscales</i>								
Perspective and prestige of teaching profession	3.11 [.85] ^{1,2}	3.47 [.73]	3.57 [.79]	3.62 [.79] ¹	3.65 [.80] ²	2.92	.05	
Workload and time pressure	3.12 [.69]	3.20 [.95]	3.15 [.91]	3.31 [.92]	3.28 [.91]	.57	.68	
Problems related to students' learning	2.92 [.76]	2.98 [.69]	3.12 [.70]	3.16 [.75]	3.16 [.75]	.92	.45	
Administrative and organizational issues at school	3.26 [.93] ^{1,2}	3.58 [.71]	3.53 [.75]	3.57 [.78] ¹	3.41 [.82] ²	2.86	.02	
Problems related to students' behavior	3.27 [.60]	3.55 [.80]	3.59 [.77]	3.65 [.76]	3.54 [.79]	1.78	.13	
Relationship between colleagues	2.18 [.84] ^{1,2,8}	2.92 [1.14] ⁸	2.81 [1.19]	3.10 [1.13] ^{1,6}	2.89 [1.20] ^{2,6}	3.68	.005	
<i>Coping styles/strategies subscales</i>								
Confrontive coping	2.00 [.34]	2.42 [.61]	2.40 [.50]	2.37 [.54]	2.36 [.54]	1.75	.13	
Seeking social support	2.66 [.15]	2.81 [.09]	2.83 [.09]	2.84 [.03]	2.78 [.01]	1.95	.09	
Wishful thinking	1.93 [.15]	2.21 [.09]	2.25 [.08]	2.16 [.03]	2.17 [.01]	1.21	.10	
Escape/avoidance	2.00 [.34]	2.42 [.61]	2.40 [.50]	2.37 [.54]	2.36 [.54]	1.75	.13	
Planful problem solving	1.98 [.34]	2.17 [.62]	2.20 [.50]	2.14 [.54]	2.17 [.52]	.80	.52	

Note: 1 = Differences between novice and proficient stage, 2 = Differences between novice and expert stage, 3 = Differences between advanced beginner stage and proficient stage, 4 = Differences between advanced beginner stage and expert stage, 5 = Differences between novice and competent stage, 6 = Differences between proficient and expert stage, 7 = Differences between competent and expert stage, 8 = Differences between novice and advanced beginner stage.

was in the dimension of “relationships between colleagues”, $F(1, 1437) = 11.88, p = .001, \eta_p^2 = .088$. Female teachers ($M = 2.96, SD = .09$) scored higher than their male ($M = 2.34, SD = .15$) counterparts.

Coping strategies

A 5 (professional development stages) by 2 (gender) by 5 (coping strategies) MANOVA showed a nonsignificant multivariate effect, Wilks's $\lambda = .98, F(4, 1437) = 1.24, p = .20, \eta_p^2 = .004$. There were also no significant univariate main effects; coping strategies did not differ across the stages of teachers' professional development, Wilks's $\lambda = .97, F(4, 1437) = 1.32, p = .19, \eta_p^2 = .006$. Likewise male and female teachers did not differ across the stages of teachers' professional development in their scores on coping strategies, Wilks's $\lambda = .99, F(1, 1437) = 1.45, p = .16, \eta_p^2 = .008$.

Effects of job demands on burnout

To further explore the relationships between each of job demands and burnout dimensions in each of the five professional development stages, a series of regression analyses using the Enter method were performed. The dimensions of job demands were the predictors, whereas the three burnout dimensions the dependent variables (see Table 2). Concerning the first category of teachers (novice teachers), the analysis revealed that no job demand was predictor of novice teachers' burnout dimensions. Regarding the advanced beginners “workload and time pressure” was a positive predictor of emotional exhaustion ($\beta = .47$) that explained 28% of the variance ($R^2 = .28$). Concerning competent stage teachers, the analysis showed that “problems related to students' behavior” was a positive predictor of emotional exhaustion ($\beta = .37$), and a negative predictor of personal accomplishment ($\beta = -.41$) that explained 18% and 22% of the variance, respectively. Further, at the proficient stage, “problems related to students' behavior” was the major positive predictor of emotional exhaustion ($\beta = .28$), followed by “workload and time pressure” ($\beta = .29$). These job demands explained 29% of the variance ($R^2 = .29$). In addition, “problems related to students' behavior” was a strong positive predictor of depersonalization ($\beta = .30$) and a negative predictor of personal accomplishment ($\beta = -.39$). Finally, at the expert stage “workload and time pressure” was a strong positive predictor of emotional exhaustion ($\beta = .47$) and depersonalization ($\beta = .16$) and a negative predictor of personal accomplishment ($\beta = -.22$). Further, “problems related to students' behavior” was positive predictor of emotional exhaustion ($\beta = .23$), a weaker

significant positive predictor of depersonalization ($\beta = .10$) and a strong negative predictor of personal accomplishment ($\beta = -.33$). In addition, “problems related to students’ learning” was a positive predictor of depersonalization ($\beta = .16$), whereas “administrative and organizational issues at school” was a positive predictor of personal accomplishment ($\beta = .18$) (Table 2).

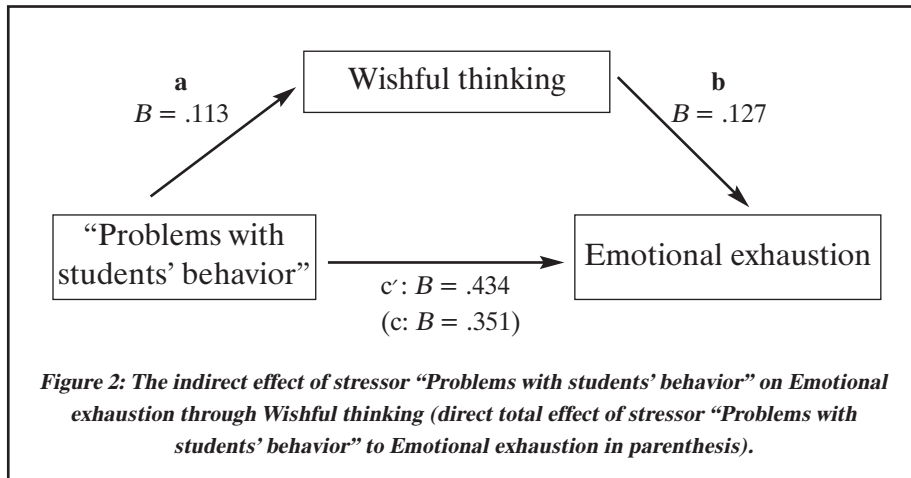
Table 2. Regression analyses with job demands as independent variables and the three burnout dimensions as dependent variables (only the model with significant predictors)

Professional development stages	Burnout dimensions (Dependent variables)	Job demands (independent variables)	Beta	T	R	R ²	F	p
Advanced beginner stage	Emotional exhaustion	Workload and time pressure	.47**	2.19	.53	.28	2.01	.03
		Problems related to students' behavior	.37**	2.67	.42	.18	2.03	.01
Competent stage	Personal accomplishment	Problems related to students' behavior	-.41**	-3.03	.47	.22	2.69	.004
	Emotional exhaustion	Problems related to students' behavior	.28**	4.70	.54	.29	24.17	.001
Proficient stage		Workload and time pressure	.29**	4.87				
	Depersonalization	Problems related to students' behavior	.30**	4.59	.35	.12	8.29	.001
Personal accomplishment		Problems related to students' behavior	-.39**	-5.99	.38	.15	10.17	.001
	Emotional exhaustion	Workload and time pressure	.47**	13.03	.58	.34	86.11	.001
		Problems related to students' behavior	.23**	6.54				
Expert stage	Depersonalization	Problems related to students' learning	.16**	3.81	.34	.11	21.67	.001
		Workload and time pressure	.16**	3.92				
		Problems related to students' behavior	.10*	2.52				
	Personal accomplishment	Problems related to students' behavior	-.33**	-8.21	.38	.14	27.66	.001
		Administrative and organizational issues at school	.18*	4.73				
		Workload and time pressure	-.22**	-5.43				

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

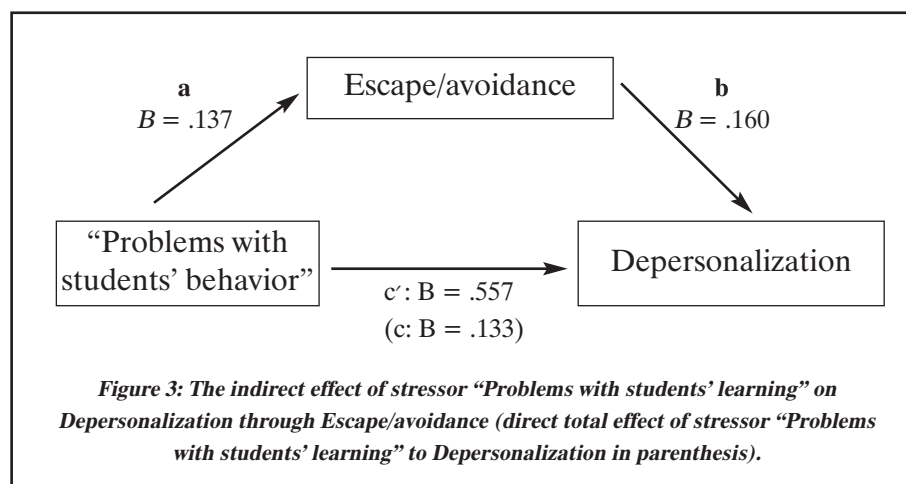
Further, following the recommendations from the existing literature (Prati et al., 2011) and given that coping strategies act as mediators between job demands and burnout, mediation analyses (using PROCESS) (Preacher & Hayes, 2008) were performed to test the possible effects of specific coping strategies that mediated the relation between job demands and burnout dimensions. The results of the mediation analyses showed mediation effects only in the competent stage of teachers' professional development. In the other stages there were no significant mediation effects.

The mediation analysis in the group of competent professional development stage (i.e., 4-5 years of experience) showed that although "problems with students' behavior" had a significant total effect on emotional exhaustion, $c: B = .351, SE = .135, BCa CI (.070, .613)$, after controlling for the effect of wishful thinking as mediator, $a: B = .113, SE = .059, BCa CI (.020, .260)$; $b: B = .127, SE = .064, BCa CI (.023, .279)$, the direct effect of "problems with students' behavior" on emotional exhaustion was increased, $c': B = .434, SE = .157, BCa CI (.118, .749)$. The indirect effect of "problems with students' learning" on emotional exhaustion through "wishful thinking", $B = .261, BCa CI (.049, .473)$, indicates partial mediation by "wishful thinking", and represents a moderate effect size, $k^2 = .121, BCa CI (.019, .229)$ (Preacher & Kelly, 2011) (see Figure 2).



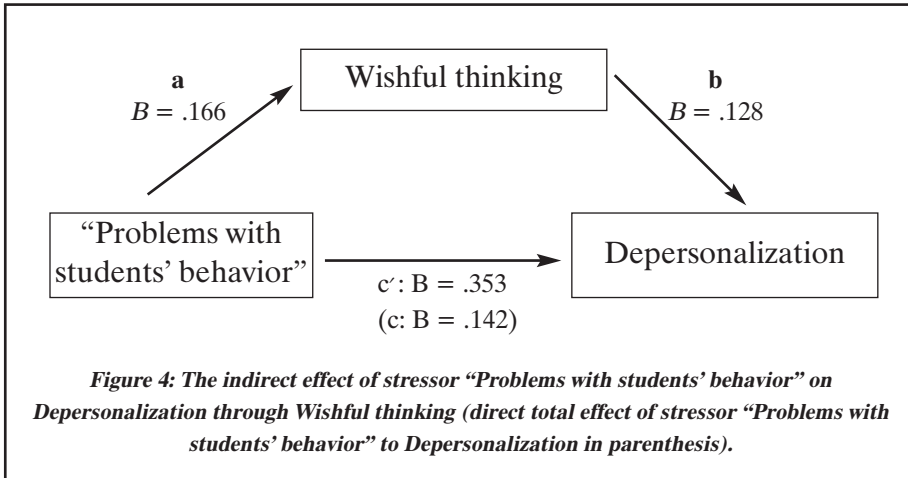
b) The mediation analysis (competent stage, 4-5 years of teaching experience) testing the effect of "problems related with students' learning" on depersonalization via escape/avoidance coping showed that, although "problems related with students' learning" had a significant total effect on depersonalization, $c: B = .133, SE = .156,$

BCa CI (.179, .445), after controlling for the effect of escape/avoidance as mediator, a: $B = .137$, $SE = .801$, BCa CI (.012, .330); b: $B = .160$, $SE = .088$, BCa CI (.014, .353), the direct effect of “problems related with students’ learning” on depersonalization increased, c: $B = .557$, $SE = .216$, BCa CI (.123, .991). The indirect effect of “problems related with students’ learning” on depersonalization through escape/avoidance, $B = .133$, $SE = .156$, BCA CI (.012, .330), indicates partial mediation of escape/avoidance and represents a moderate effect size, $k^2 = .127$, BCa CI (.011, .247) (Preacher & Kelly, 2011) (Figure 3).

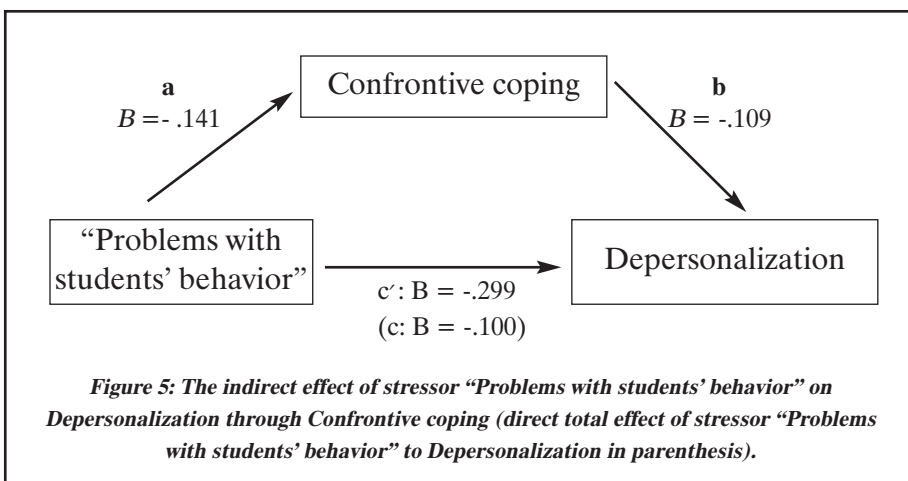


c) The mediation analysis (competent stage, 4-5 years of teaching experience) testing the effect of “problems related with students’ behavior” on depersonalization via wishful thinking showed that, although “problems related with students’ behavior” had a significant total effect on depersonalization, c: $B = .142$, $SE = .059$, BCa CI (.048, .301), after controlling for the effect of wishful thinking as mediator, a: $B = .166$, $SE = .067$, BCA CI (.053, .329); b: $B = .128$, $SE = .052$, BCA CI (.041, .258), the direct effect of “problems related with students’ behavior” on depersonalization increased, c: $B = .353$, $SE = .135$, BCa CI (.081, .624). The indirect effect of “problems with students’ behavior” on depersonalization through wishful thinking, $B = .212$, $SE = .129$, BCA CI (.049, .469), indicates partial mediation of wishful thinking and represents a moderate effect size, $k^2 = .131$, BCA CI (.043, .259) (Preacher & Kelly, 2011) (Figure 4).

d) The mediation analysis (competent stage, 4-5 years of teaching experience) testing the effect of “problems related with students’ behavior” on personal accomplishment via confrontive coping showed that, although “problems related with



students’ behavior” had a significant total negative effect on personal accomplishment, c : $B = -.100$, $SE = .055$, $BCa\ CI (-.237, -.012)$, after controlling for the effect of confrontive coping as mediator, a : $B = -.141$, $SE = .075$, $BCa\ CI (-.318, -.015)$; b : $B = -.109$, $SE = .058$, $BCa\ CI (-.241, -.010)$, the direct effect of “problems with students’ behavior” increased, c' : $B = -.299$, $SE = .112$, $BCa\ CI (-.523, -.075)$. The indirect effect of “problems with students’ behavior” on personal accomplishment, through “confrontive coping”, $B = -.198$, $SE = .104$, $BCa\ CI (-.406, -.009)$, indicates partial mediation by confrontive coping and represents a moderate effect size, $k^2 = .127$, $BCa\ CI (.019, .245)$ (Preacher & Kelly, 2011) (Figure 5).



DISCUSSION

The study examined differences in burnout dimensions, job demands and coping strategies between teachers with different years of teaching experience, based on Berliner's model of teacher professional development stages (Berliner, 1994). Results of the study revealed changes in the three burnout dimensions across the different stages of teachers' professional development. Further, daily job demands were recognized as predictors of teachers' emotional exhaustion, depersonalization and personal accomplishment. Finally, the mediating role of coping strategies in the relation between job demands and burnout dimensions was also examined in the different stages of teachers' professional development. The main findings of the study and their possible explanations are discussed in the following.

Burnout in different stages of teachers' professional development

Surprisingly, with respect to burnout dimensions in different stages of teachers' career development, the results of this study revealed that teachers at the first two stages of their career development are not at risk for burnout. However, these results are not in line with the existing literature, according to which novice teachers, compared to those with more teaching experience, indicate greater amounts of exhaustion and higher degrees of depersonalization (Gold & Michael, 1985; Schwab & Iwanicki, 1982). Gavish and Friedman (2010) reported that teachers at the early stages of their career experience burnout and, of the three burnout measures, depersonalization was the one most influenced by the reality the novice teachers are facing during the first years of service. Further, Friedman (2000) and Holloman (1999) pointed out that teachers at the early stages of their career are not fully satisfied with the organizational context of their working environment during their first years as professionals.

The results of the present study showed that teachers at the first two stages of their career (novice level and advanced beginner level: teaching experience from 1 to 3 years) had the lowest scores on emotional exhaustion and depersonalization and the highest scores on personal accomplishment. This finding, in conjunction with the low scores on job demands teachers at the first two stages had, can explain why this group of teachers have been found in the past to report positive emotions (Montgomery & Rupp, 2005), strong belief in teaching professional goals and willingness to exert considerable effort to achieve these goals (Montgomery & Rupp, 2005). According to Berliner's (1994) model, teachers at the beginning of their teaching career still learn the objective facts and features of teaching situations. The

lower levels of emotional exhaustion and depersonalization and the higher levels of personal accomplishment in the present study presumably emerged because novices and advanced beginners are intensively involved in the instructional process and pursuing of teaching experiences; reflection on such experiences then guides their own teaching practice.

It is also interesting that years of teaching experience goes “hand in hand” with emotional exhaustion, and teachers at the last stage of their career development (expert level ≥ 11 years of teaching experience) reported the highest scores on emotional exhaustion. Teaching usually comprises face to face interaction with students (Naring, Vlerick, & Van de Ven, 2012). Teachers’ role is not only to teach, but also to establish and maintain a learning friendly environment (Wrobel, 2013), draw students’ attention and motivate them (Naring et al., 2012). In practice, this means showing enthusiasm while conducting classes, reacting with empathy to pupils’ worries and needs, hiding fatigue and annoyance or displaying positive emotions even when pupils are being difficult and rude (Wrobel, 2013). However, interactions with students are continuous, intense and long lasting, and teachers are repeatedly exposed to student misbehavior. These conditions seem to be sufficient for “older” teachers to lose their enthusiasm, a condition positively related to emotional exhaustion (Demerouti et al., 2001; Kunter, Frenzel, Nagy, Baumert, & Pekrun, 2011) and has negative effects on teachers’ functioning (Pyzalski, 2008; Wrobel, 2013).

Furthermore, the present study showed that teachers at the competent stage (4-5 years of teaching experience) reported the highest score on depersonalization and the lowest score on personal accomplishment. Teachers at this stage likely had greater hopes and expectations in the beginning of their career (Okas et al., 2014), are characterized by deliberate choices about what they are going to do (Baron et al., 1996; Berliner, 1994) and tend to feel more responsible for what happens in their classroom or school. However, Farber (2000) reported that despite teachers’ best intentions, they feel overwhelmed in face of reality, that is, salaries, which are lower compared to other professions (Farber, 2000), limited decision-making power (Gersten, Keating, Yovanoff, & Harniss, 2001), and lack of support from school principal and colleagues (Mazur & Lynch, 1989). Such situations are common in the Greek educational system as well and likely increase depersonalization (which is mainly influenced by the reality that the teachers had been exposed to during the first years) (Garish & Friedman, 2010). Depersonalization, which is a defensive coping strategy, has significant dysfunctional ramifications (Maslach & Jackson, 1986), and is “necessary” to diminish feelings of personal accomplishment (Cordes & Dougherty, 1993). As a result, teachers have the tendency to evaluate themselves negatively (Cordes & Dougherty, 1993) and they reported the lower scores on personal accomplishment.

Overall, the above findings concerning burnout across the different stages of teachers' career development suggest the need for a closer look at specific groups of teachers, such as teachers at the competent stage.

Job demands and burn out

Concerning the extent to which job demands across the different stages of teachers' professional development predict the burnout dimensions, the study showed that "workload and time pressure" as well as "problems related to students' behavior" were the most prevalent job demands predicting burnout. These findings are contrary to the evidence provided by studies in which time pressure and workload were rated as the least likely sources of occupational stress for teachers (Boyle, Borg, Falzon, & Baglioni, 1995; Pithers & Fogarty, 1995). However, they are in line with studies showing associations between student misbehavior and teacher burnout (Friedman, 2010; Hastings, & Bham, 2003) as well as work overload and burnout components (Schaufeli & Bakker 2004). More specifically, Pierce and Molloy (1990) reported that comparisons between high and low burnout teachers showed that student misbehavior is associated with high levels of teacher-reported burnout (Hastings & Bham, 2003). Further, Hakanen, Bakker, and Schaufeli, (2006) reported that burnout is predicted by teachers' perceptions of job demands (e.g., overload). The present study provided a different insight in relation to job demands contributing to burnout components: teachers' emotional exhaustion, depersonalization and personal accomplishment at different stages of professional development are predicted by "workload and time pressure" as well as "problems related to students' behavior".

The testing of mediation effects in the present study indicated that teachers at the "competent" stage were at risk of emotional exhaustion and depersonalization if they also tended to use emotion/avoidance coping strategies to cope with job demands such as "problems with students' behavior and students' learning". These strategies, which are considered as maladaptive (Rowe, 2000), have been found to predict greater stress (Prati et al., 2011). The mediation analyses also indicated that coping strategies such as escape/avoidance and wishful thinking act as partial mediators (representing a moderate effect size) on the relationship between "problems related to students' learning and students' behavior" and depersonalization and emotional exhaustion, respectively, supporting the hypothesis about the indirect effect of these aspects of job demands. Emotion- focused coping strategies aggravate the impact of job demands on teachers' depersonalization and emotional exhaustion, particularly when teachers are at the "competent" stage. These findings are in line with studies showing that avoidance is a positive predictor of emotional exhaustion and

depersonalization (Austin et al., 2005; Betoret & Artiga, 2010; Shin et al., 2014).

This study also addressed the mediating role of problem-focused coping strategies in this particular stage of teacher career development (i.e., competent stage). More specifically, confrontive coping (an adaptive way to cope with stress) was found to partially mediate the effect of “problems related to students’ behavior” on depersonalization. Confrontive coping negatively predicted depersonalization. It is plausible that confrontive coping is an individual characteristic (Jenaro, Floves, & Arias, 2007) that can help teachers adjust to job demands and thus prevent depersonalization (Jenaro et al., 2007; Shin et al., 2014). Confrontive strategies also moderate daily hassles and facilitate performance (O’Connor, Conner, Jones, McMillan, & Ferguson, 2009) and may buffer the relationship between job demands and burnout components (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007), leading to higher productivity (Schaufeli & Taris, 2014) and better adjustment in the school environment (O’Brennan, Bradshaw, & Furlong, 2014).

To sum up, this study contributed to the existing research on teacher stress, coping and burnout providing information on the association of burnout with specific stages of teachers’ professional development. The study revealed that the various dimensions of burnout vary across one’s teaching career confirming the existing literature that burnout is an ongoing process that emerges gradually over time (Maslach, 1982). Further, the study showed that coping strategies (problem focused or emotion focused) mediate in the relation between job demands and burnout dimensions.

Limitations of the study and implications for research and practice

This study has limitations that need to be pointed out. The study did not examine job resources, which represent positive job characteristics. Future research should examine the role of job resources (e.g., job control, social support) which are motivational components of burnout, in the relation between job demands and burnout dimensions. Further, this study focused only on burnout and coping strategies, without taking into consideration variables such as personality, financial and family variables, as well as school environment factors that may play a significant role in job demands and burnout syndrome in teacher profession.

Despite these limitations, the present findings have implications for future research and practice. Future research should examine theoretical models for which student behaviors and aspects of job workload predict teachers’ burnout dimensions. Also, how teachers’ personal characteristics (e.g., psychological hardiness, emotion regulation, self-efficacy, competence) affect their ability to manage student behavior and deal effectively with job demands. For example, enhancing teachers’ psychological hardiness and reducing teachers’ use of emotion-focused coping strategies may help

and protect them from difficulties in their job. Nevertheless, longitudinal studies are needed to further validate the hypothesized relationships concerning stages of teachers' professional development and burnout, as well as the mediating role of coping strategies in the relationship between job demands and burnout dimensions. Such studies may help identify teachers that are most at risk for burnout as well as different teacher profiles in terms of coping strategies vis-à-vis job demands. They may also inform workplace interventions aimed at preventing or reducing burnout.

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