



Job stressors, personality and burnout in primary school teachers

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Background. Teaching is considered a highly stressful occupation. Burnout is a negative affective response occurring as a result of chronic work stress. While the early theories of burnout focused exclusively on work-related stressors, recent research adopts a more integrative approach where both environmental and individual factors are studied. Nevertheless, such studies are scarce with teacher samples.

Aims. The present cross-sectional study sought to investigate the association between burnout, personality characteristics and job stressors in primary school teachers from Cyprus. The study also investigates the relative contribution of these variables on the three facets of burnout – emotional exhaustion, depersonalization and reduced personal accomplishment.

Sample. A representative sample of 447 primary school teachers participated in the study.

Method. Teachers completed measures of burnout, personality and job stressors along with demographic and professional data. Surveys were delivered by courier to schools, and were distributed at faculty meetings.

Results. Results showed that both personality and work-related stressors were associated with burnout dimensions. Neuroticism was a common predictor of all dimensions of burnout although in personal accomplishment had a different direction. Managing student misbehaviour and time constraints were found to systematically predict dimensions of burnout.

Conclusions. Teachers' individual characteristics as well as job related stressors should be taken into consideration when studying the burnout phenomenon. The fact that each dimension of the syndrome is predicted by different variables should not remain unnoticed especially when designing and implementing intervention programmes to reduce burnout in teachers.

Burnout is described as a tripartite syndrome that includes feelings of emotional exhaustion, depersonalization and lack of personal accomplishment that is a response to chronic stress in jobs where individuals work with people (Maslach, Jackson, & Leiter,

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1996). Emotional exhaustion refers to feelings of being emotional overextended and a strong reduction of one's emotional resources. Depersonalization refers to a negative, callous and detached attitude towards the persons that one works with; for example, parents, clients or pupils. Reduced personal accomplishment is assessed through a person's negative self-evaluation in relation to his or her job performance (Schaufeli, Maslach, & Marek, 1993). The three burnout dimensions although empirically related, are conceptually distinct – a premise that has been further confirmed by research findings that revealed differential correlates for each of the three components of the construct (e.g. Kokkinos & Davazoglou, 2005; Mills & Huebner, 1998).

The manifestation of burnout is a function of stressors engendered at both the environmental-organizational and personal levels (e.g. Farber, 1991). Among the explanatory models developed to understand the manifestation of burnout is the transactional model that posits that burnout can be explained as the result of an interaction between triggering environmental variables and intra-personal traits (e.g. personality characteristics), which may facilitate or inhibit the manifestation of burnout (Shirom, 1993). However, although it seems that burnout occurs as a result of a complex interaction between individual characteristics and issues in the work environment, research has not systematically considered the role of person variables in this direction, especially in studying the manifestation of burnout in teachers' samples.

Many contextual factors have been identified in the literature to relate to teachers' occupational stress, such as interpersonal demands, lack of professional recognition, discipline problems in the classroom, the diversity of tasks required, bureaucracy, lack of support, workload, time pressure, the amount of paperwork required and lack of resources provided (Burke, Greenglass, & Schwarzer, 1996; Chan, 1998; Pithers, 1995). Travers and Cooper (1996) found that teachers' stress was also a result of lack of social recognition, large class size, isolation, fear of violence, lack of classroom control, role ambiguity and limited professional opportunities.

Stable personality characteristics predispose individuals to view the adverse events in a certain way that can either impair or facilitate the adaptation process and its psychological and physical health outcomes (Kaplan, 1996). Of the most comprehensive and well - developed models of personality is the five-factor model (Costa & McCrae, 1992), which posits that adult personality can be comprehensively described in terms of neuroticism (the susceptibility to psychological distress, inability to control urges, proneness to unrealistic ideas and inability to cope with stress), extraversion (the disposition towards positive emotions, sociability and high activity), openness (the proclivity towards variety, intellectual curiosity and aesthetic sensitivity), agreeableness (the inclination towards interpersonal trust and consideration of others) and conscientiousness (the tendency towards persistence, industriousness and organization). The use of the five-factor model of personality to study the process of burnout has been applied to various populations. Zellars, Perrewé, and Hochwarter (2000) studied burnout in a sample population of nursing workers, and found that neuroticism predicted emotional exhaustion; extraversion and agreeableness predicted depersonalization, and openness and extraversion predicted personal accomplishment. Mills and Huebner (1998) have shown that neuroticism and introversion correlated with the three dimensions of burnout in a sample of school psychologists. In addition, emotional exhaustion was associated with conscientiousness and agreeableness; depersonalization was associated with agreeableness; and personal accomplishment with conscientiousness.

Bolger and Eckenrode (1991) stated that the personality traits of extraversion and neuroticism (anxiety) are associated with current mental health status. Moreover, while

neuroticism has been found to predispose individuals to experience negative life events, extraversion predisposed them to the opposite direction (Magnus, Diener, Fujita, & Pavot, 1993). Individuals low in extraversion appear quiet or reserved, whereas those high in extraversion are cheerful, optimistic and energetic possibly because they are more likely to engage in more activities to overcome stressful conditions. Indeed, there is research suggesting that workers higher in positive affectivity (a component of extraversion) experience less burnout (Iverson, Oleklans, & Erwin, 1998). Wright and Cropanzano (1998) found that employees higher in negative affect (neuroticism) report more feelings of emotional exhaustion, a finding that also holds true in the case of depersonalization (Iverson *et al.*, 1998). Findings regarding the role of the personality dimension of agreeableness in the process of burnout indicate that those individuals high in this dimension exhibit more nurturing behaviours, are more sensitive and humanistic and thus are less likely to depersonalize others. In addition, since they are dedicated and idealistic, they perceive greater personal accomplishment. Finally, there is very little evidence to link Openness with stress. Strutton, Pelton, and Lumpkin (1995) found that persons high in this personality dimension tended to use more problem-focused coping, suggesting that since such individuals are more open to new experiences, they would be less likely to feel threatened by change.

Research on the personality correlates of teacher burnout has indicated that neuroticism was associated with (Maslach, Schaufeli, & Leiter, 2001) and predicted burnout (Burke & Greenglass, 1995, 1996). Schaufeli and Enzmann (1998), in a comprehensive review of more than 250 studies on burnout, reported that neuroticism was one of the strongest personality correlates of burnout, particularly of emotional exhaustion. Fontana and Abouserie (1993), using the Eysenck model of personality (Eysenck & Eysenck, 1985) to study the links between stress levels, gender and personality in a sample of teachers, have found associations between burnout and high scores in neuroticism, introversion and psychoticism, respectively.

Cano-García, Padilla-Muñoz, and Carrasco-Ortiz (2005) with a sample of Spanish special education and elementary school teachers found that the highest scores in burnout were obtained by teachers high in neuroticism and introversion. In a study of the relative contribution of person (Big Five model) and environment variables in the prediction of burnout dimensions among teachers working in special education in Greece, Kokkinos and Davazoglou (2005) found that teachers' personality traits were the most significant predictors of the three burnout dimensions compared with contextual and demographic variables. In particular, high levels of neuroticism and low levels of agreeableness were predictive of emotional exhaustion. In the case of depersonalization, neuroticism was the most important predictor, whereas personal accomplishment was predicted by low levels of neuroticism, and high levels of extraversion and conscientiousness.

When comparing the predictive utility of contextual, demographic and personality variables, research findings appear somewhat contradictory. Billingsley and Cross (1992), for example, reported that contextual variables have more predictive value than demographic ones, whereas others consider contextual variables as better predictors than personality traits (Burisch, 2002; Zellars *et al.*, 2000). In assessing the predictive utility of personality and contextual variables, Mills and Huebner (1998) found that personality characteristics explained more variance than contextual aspects in burnout.

In an effort to better understand the role of both environmental and personal variables in teachers' burnout, the present study examines the associations between job stressors, basic personality characteristics (Big Five factor model) and dimensions of

burnout among primary school teachers. In addition, it is purported to study the relative importance of the variables under study on the components of burnout, by assessing their predictive utility and therefore to identify the most important determinants of each burnout dimension. Previous research with Cypriot primary education teachers (Kokkinos, 2002) has revealed that teachers' appraisal by students, as well as managing student misbehaviour, were among the most important sources of stress. It is therefore hypothesized that teachers who perceive these sources as more stressful would report more burnout symptoms. As far as the personality determinants of burnout are concerned, it is hypothesized that teachers high in neuroticism will report more feelings of emotional exhaustion and depersonalization, as neuroticism is consistently found to be related to emotional exhaustion and depersonalization. Moreover, teachers higher in extraversion will experience fewer burnout symptoms, while those with high scores in conscientiousness are more likely to report more feelings of personal accomplishment. In terms of agreeableness, those teachers with high scores in this dimension are less likely to experience depersonalization, while their feelings of personal accomplishment will be greater. Openness may buffer the individual from the potentially detrimental effects of burnout, and therefore it is hypothesized that teachers high in openness are less likely to report burnout symptoms.

Method

Sample

The sample of the study consisted of 447 primary school teachers (79.3% female, 20.7% male) and it was proportionately stratified from all regions of Cyprus. Teachers' age varied from 21 to 59 years ($M = 33.84$ and $SD = 10.26$) and their teaching experience between 1 and 39 years ($M = 11.96$ and $SD = 10.44$). Of the sample, 56.8% had up to 10 years of teaching experience, whereas 43.2% had up to 35 years. There were 321 (73.1%) who had no administrative post, whereas the rest 118 had administrative status – they were either head teachers (5%), or deputy head teachers (21.9%). Of the teachers, 292 (65.3%) were married, 130 (29.15) were single and 5 (1.1%) were divorced, whereas 20 teachers (4.5%) did not provide any information on their marital status. In terms of teachers' educational attainment, 168 (37.6%) were bachelor holders, 171 (38.8%) had attended 2-year teacher training programmes and did an extra year to get a bachelor equivalent degree, 39 (8.7%) were 2-year teaching training programme graduates and 66 (14.8%) had a postgraduate degree. Three teachers did not report their level of education.

Procedure

One thousand surveys were delivered by courier to schools, and were distributed at faculty meetings. A return mail envelope was provided, and respondents were assured of the anonymity and confidentiality of their responses via a cover letter. The completed questionnaires were mailed directly back to the author (44.7% response rate).

Measuring instruments

Job stressors

A 63-item scale was developed to measure potential sources of stress in teachers. The 63 items represented a wide range of work situations that have been either documented in

previous international research (e.g. Travers & Cooper, 1996) or emerged from in-depth pre-survey interviews conducted with teachers during in-service training seminars. Participants indicated the level of stress they had experienced on a 5-point scale ranging from 1 (*no stress*) to 5 (*extreme stress*).

The 63 job stressors were factor analysed using principal components analysis with varimax rotation. Eleven factors with eigenvalues over 1 were generated, accounting for a total of 65% of variance. Items with factor loadings ≥ 0.4 were used to interpret the factors. Items loaded on the respective factors were summed to form subscales of work stress, which were labelled: *students' behaviour* (10 items, e.g. students' verbal aggression), *managing student misbehaviour* (8 items, e.g. maintaining discipline), *decision making* (3 items, e.g. lack of participation in decision making), *relationships with colleagues* (9 items, e.g. conflicts between colleagues), *role ambiguity* (5 items, e.g. lack of clarity concerning my role in the school), *poor working conditions* (6 items, e.g. lack of teaching material), *appraisal of teachers by students* (5 items, e.g. my students' opinion about my teaching efficacy), *work overload* (4 items, e.g. administrative obligations), *appraisal of teachers* (5 items, e.g. when my performance is assessed by others), *time constraints* (5 items, e.g. having to work at home), *specific teaching demands* (3 items, e.g. teaching students with special educational needs). Internal reliabilities, using the Cronbach's alpha coefficient, were, respectively: .91, .90, .76, .89, .85, .84, .83, .79, .82, .80 and .74. A detailed description of factor analytic results is reported elsewhere (Kokkinos, 2002).

Burnout

The Greek translation of the Maslach Burnout Inventory Educators' Survey (MBI-ES; Kokkinos, 2006; Maslach *et al.*, 1996) was used to assess teachers' burnout. The scale contains 22 items that fall on three subscales: emotional exhaustion (9 items), depersonalization (5 items) and lack of a sense of personal accomplishment (8 items). Participants rate how frequently they experience these feelings on a 7-point scale, ranging from *never* to *daily*. Internal consistency ranges from .76 to .90 (Iwanicki & Schwab, 1981). For the current study, Cronbach's alphas were .85 for emotional exhaustion, .60 for depersonalization and .73 for personal accomplishment.

Personality

The Big Five personality traits were assessed by the Greek translation of the NEO-Five Factor Inventory (NEO-FFI; Costa & McCrae, 1992; Panayiotou, Kokkinos, & Spanoudis, 2004), a 60-item instrument measuring five dimensions of the normal personality. Respondents indicate their degree of agreement with each item on a 5-point Likert type scale (0 = *strongly disagree*, 4 = *strongly agree*). The Greek instrument is a direct translation of the NEO-FFI maintaining the same number of items and scoring procedures. However, for the purposes of the present study, only 40 items were used to compute scale scores, since the psychometric study conducted by Panayiotou *et al.* (2004) established that 20 items of the Greek translation failed to load on the anticipated factors. These were as follows: conscientiousness = 11 items, neuroticism = 8 items, extraversion = 7 items, agreeableness = 8 items, openness = 6 items. Cronbach's alphas for the each scale summed scores were: .84 for conscientiousness, .80 for neuroticism, .79 for extraversion, .14 for agreeableness and .60 for openness. Since the

internal reliability coefficient for the agreeableness scale was very small, it was excluded from subsequent analyses.

Demographics

Participants were asked to indicate their gender, age, educational attainment, years of teaching experience, as well as their marital and administrative status.

Results

Table 1 presents the descriptive statistics for the variables under study as well as the bivariate correlations between job stressors, teachers' personality and burnout dimensions.

In order to examine the effects of teachers' demographic characteristics on each burnout dimension, three five-way analyses of variance (ANOVA) were performed. Levels of independent variables were as follows: gender (male vs. female), teaching experience (less than 10 years vs. more than 10 years of teaching), family status (married vs. single), administrative post (head and deputy head teachers vs. teachers) and educational attainment (university degree vs. 3-year teaching training programme vs. postgraduate degree).

There was a significant main effect of teaching experience on emotional exhaustion, $F(1, 366) = 15.36, p < .001$, with teachers having more than 10 years of teaching showing greater emotional exhaustion than those with up to 10 years of teaching. In addition, there were also three significant two-way interactions between teachers' gender and family status, $F(1, 366) = 4.41, p < .05$, between gender and teaching experience, $F(1, 366) = 5.70, p < .05$, and between teaching experience and educational attainment, $F(2, 366) = 3.65, p < .05$. Follow-up analyses indicated that married female teachers were more emotionally exhausted than their married male counterparts, $F(1, 288) = 14.86, p < .001$. Male teachers with less than 10 years of teaching experience were less emotionally exhausted than their female counterparts, $F(1, 247) = 12.43, p < .001$, as well as the male teachers with more than 10 years of teaching experience compared with their female counterparts, $F(1, 185) = 9.81, p < .05$.

No significant main or interaction effects were obtained for the depersonalization dimension of burnout. Finally, two significant two-way interactions between family status and educational attainment, $F(2, 366) = 3.55, p < .05$, and between teaching experience and educational attainment, $F(2, 366) = 4.1, p < .05$, were obtained for the personal accomplishment dimension. Follow-up analyses indicated that teachers with less than 10 years of teaching experience with postgraduate studies had less feelings of personal accomplishment than those teachers with more than 10 years of teaching experience with postgraduate studies, $F(1, 62) = 6.12, p < .05$. No significant main effects were obtained.

Correlation analyses

The bivariate correlations, presented in Table 1, between job stressors, teachers' personality and burnout dimensions showed that the three burnout dimensions were significantly correlated with job stressors and personality variables.

Emotional exhaustion and depersonalization were significantly positively correlated with all job stressors, in the former case (correlations ranged from $r = .19$ to $r = .53$),

Table 1. Pearson correlations between job stressors personality and the three burnout dimensions. Means and standard deviations are also presented

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Students' behaviour	3.11	0.83																	
2. Managing student misbehaviour	2.67	0.86	.80**																
3. Decision making	2.78	0.92	.56**	.48**															
4. Relationships with colleagues	2.80	0.83	.63**	.59**	.59**														
5. Role ambiguity	2.77	0.92	.49**	.40**	.62**	.72**													
6. Poor working conditions	2.96	0.78	.64**	.50**	.53**	.57**	.50**												
7. Appraisal of teachers by students	2.52	0.88	.56**	.67**	.40**	.60**	.46**	.44**											
8. Work overload	2.54	0.85	.50**	.57**	.43**	.50**	.41**	.55**	.49**										
9. Appraisals of teachers	3.34	0.87	.66**	.63**	.47**	.68**	.50**	.61**	.59**	.56**									
10. Time constraints	2.81	0.88	.60**	.56**	.41**	.47**	.34**	.58**	.40**	.58**	.59**								

Table 1. (Continued)

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
11. Specific teaching demands	3.01	.90	.61**	.59**	.39**	.48**	.36**	.60**	.50**	.50**	.57**	.51**							
12. Conscientiousness	4.12	0.52	.10*	-.03	.13**	.04	.11*	.11*	-.11*	.05	.05	.01	.01						
13. Neuroticism	2.36	0.65	.40**	.48**	.27**	.39**	.31**	.29**	.49**	.40**	.46**	.35**	.36**	-.12**					
14. Extraversion	3.50	0.64	-.06	-.15**	.10*	.01	.08	.07	-.09	-.04	-.08	-.04	-.09	.30**	-.26**				
15. Openness	3.61	0.61	.05	.00	.12*	.01	.05	.09	-.01	.04	.08	.03	.08	.14**	.01	.16**			
16. Emotional exhaustion	30.86	9.10	.45**	.53**	.27**	.32**	.19**	.28**	.40**	.44**	.44**	.47**	.36**	.13	.50**	-.23**	.06		
17. Depersonalization	4.02	3.80	.21**	.33**	.10*	.14**	.08	.11*	.28**	.19**	.13**	.25**	.18**	-.30**	.29**	-.22**	-.16**	.38**	
18. Personal accomplishment	38.75	5.94	-.12**	-.20**	.03	-.06	.02	.04	-.22**	-.13**	-.11**	-.10*	-.15**	.37**	-.26**	.33**	.15**	-.15**	-.39**

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

and all but one in the latter (correlations ranged from $r = .10$ to $r = .33$). Seven job stressors were negatively correlated with personal accomplishment, namely, students' behaviour, managing student misbehaviour, appraisal of teachers by students, work overload, appraisals of teachers, time constraints and specific teaching demands (correlations ranged from $r = -.10$ to $r = -.22$).

Of the personality variables, conscientiousness had a significant positive correlation with personal accomplishment ($r = .37, p < .001$), and a negative correlation with depersonalization ($r = -.30, p < .001$). Neuroticism was positively correlated with emotional exhaustion ($r = .50, p < .001$) and depersonalization ($r = .29, p < .001$), and negatively correlated with personal accomplishment ($r = -.26, p < .001$). Extraversion was negatively correlated with emotional exhaustion ($r = -.23, p < .001$), and depersonalization ($r = -.22, p < .001$), whereas it was positively associated with personal accomplishment ($r = .33, p < .001$). Finally, openness was negatively correlated with depersonalization ($r = -.16, p < .001$), and personal accomplishment ($r = -.15, p < .001$).

Regression analyses

A series of regression analyses were performed to uncover the relative contribution of various factors in predicting burnout dimensions among primary school teachers. Three separate stepwise multiple regression analyses were conducted regressing each burnout dimension on teachers' demographics, personality characteristics and job stressors. Results are shown in Table 2.

Table 2. Demographic, personality and job stressors predictors of burnout dimensions

Variables	R^2	Standardized Beta (β)	t	p
Emotional exhaustion				
Managing student misbehaviour	.29	.27	5.30	.00
Neuroticism	.37	.28	6.27	.00
Time constraints	.40	.19	3.85	.00
Extraversion	.41	-.11	-2.84	.01
Conscientiousness	.41	.09	2.36	.02
Role ambiguity	.42	-.12	-2.84	.01
Administrative status	.43	.09	2.35	.02
Depersonalization				
Managing student misbehaviour	.11	.29	4.91	.00
Conscientiousness	.20	-.24	-5.62	.00
Neuroticism	.21	.18	3.55	.00
Openness	.23	-.12	-2.79	.01
Appraisal of teachers by students	.24	-.20	-3.25	.00
Time constraints	.25	.14	2.56	.01
Personal accomplishment				
Conscientiousness	.15	.29	6.44	.00
Extraversion	.20	.19	4.14	.00
Neuroticism	.23	-.13	-2.71	.01
Administrative status	.24	-.11	-2.64	.01
Appraisal of teachers by students	.25	-.10	-2.12	.04
Openness	.26	.09	2.04	.04

Emotional exhaustion was predicted by feelings of stress in managing student misbehaviour, neuroticism, time constraints, extraversion, conscientiousness, role ambiguity and administrative status (being a teacher without administrative status), which all together accounted for 43% of the variance. It is interesting to note that the last four predictors of emotional exhaustion contributed only 3% in the explanation of variance. An examination of the differential contribution of the three sets of predictors (sources of stress, personality traits and demographics) indicates that two sources of stress, namely, managing student misbehaviour and time constraints, explained most of the variance in emotional exhaustion, while in terms of personality characteristics, neuroticism seems to significantly add to the explained variance, whereas extraversion and conscientiousness had a trivial contribution. Interestingly, from the teachers' demographic variables, only administrative status explained 1% of the variance in emotional exhaustion.

Regarding depersonalization, managing student misbehaviour and conscientiousness were the stronger predictors of this burnout dimension, whereas an additional 5% of the variance was explained by neuroticism, openness, appraisal of teachers by students and time constraints. In the case of depersonalization, job stressors contributed almost equally with teachers' personality traits to the explanation of variance. However, the personality dimension of conscientiousness was the most important predictor, compared with the other two (neuroticism and openness). None of teachers' demographic variables entered the equation.

Personal accomplishment was mainly predicted teachers' personality characteristics namely, conscientiousness, extraversion and neuroticism, which all together explained approximately one quarter (23%) of the variance, whereas teacher's administrative status (being a head teacher), appraisal of teachers by students and openness contributed another 3%. Teachers' personality traits were the most significant predictors of the rest of the variables entered in the model.

Discussion

The purpose of the present study was to empirically examine the link between job stressors, personality characteristics and dimensions of burnout in a representative sample of primary school teachers from Cyprus. In addition, the study sought to identify the best predictive combination of the variables under study on each dimension of burnout.

Results showed that both personality and specific job stressors were associated with burnout dimensions, thus providing support for the transactional model of burnout in which in order to better understand its process, we should take into account both environment and person variables. The findings are consistent with those of Schaufeli *et al.* (1993), Kokkinos and Davazoglou (2005) and Cano-García *et al.* (2005). Emotional exhaustion and depersonalization were more related to environmental stressors, whereas personal accomplishment to personality variables.

Results from the regression analyses revealed that both personality and job stressors were found to be significant predictors of burnout, thus lending support to the proposition that each burnout component occurs as a result of different variables. In addition, the findings of the present study promote our understanding of the role of personality characteristics in teacher burnout. Specifically, neuroticism was a common predictor of all dimensions of burnout although in personal accomplishment had a different direction. Conscientiousness appears to be a key personality trait that is

associated with depersonalization and personal accomplishment. Specifically, teachers with low scoring in conscientiousness demonstrated higher levels of depersonalization, whereas those high in conscientiousness are more likely to exhibit higher levels of personal accomplishment.

In terms of specific job stressors, it appears that there are certain issues in teachers' job that cause them more concern, stress and eventually burnout. Managing student misbehaviour and time constraints were the two sources of stress that systematically predicted dimensions of burnout, whereas role ambiguity and appraisal of teachers by their students contributed much less but significantly. These findings confirm our hypothesis based on previous research with Cypriot teachers (Kokkinos, 2002). Specifically, greater levels of stress arising from managing order and discipline in the classroom as well as lack of time were found to significantly predict emotional exhaustion and depersonalization. Classroom discipline is a well-documented source of teacher stress (Borg, Riding, & Falzon, 1991; Friedman, 1995; Kyriacou, 1987). Managing students' misbehaviour is considered one of the most important activities in teacher's role (Langdon, 1996). Effective classroom discipline provides the order that is necessary for teachers to instruct students in various skills. The practices teachers use to discipline students are affected by a plethora of issues such as their ideas of what constitutes 'best discipline practice', training curricula, staff development programmes and so on. Stress arises when a teacher appraises the environment as one that taxes or exceeds her resources, and therefore is consequently perceived as threatening (Lazarus & Folkman, 1984). Teachers who are more idealistic, and who have high expectations that attempt to achieve, have been reported as generally more prone to stress and burnout (Pines, 1982). Results from the present study somewhat supported this proposition, since conscientiousness (the tendency towards persistence, industriousness and organization) was a small though significant contributory factor of emotional exhaustion. However, it could be that teachers who experience stress as a result of other job-related issues (i.e. work overload) may perceive student behaviours more negatively (Kokkinos, Panayiotou, & Davazoglou, 2005) and therefore inflate its significance as a stressor.

In terms of personality traits, the results were in line with our expectations regarding the correlates of emotional exhaustion and depersonalization, revealing that higher scores in neuroticism tended to increase emotional exhaustion and depersonalization. Individuals high in neuroticism tend to express more negative emotions, emotional instability and stress reaction, and therefore they become more vulnerable to burnout and to increased psychopathology (Watson, Clark, & Harkness, 1994).

Depersonalization was predicted by greater levels of stress arising from managing student misbehaviour and low scores in conscientiousness. Depersonalization seems to occur as a form of defensive withdrawal, when insufficient emotional resources are available. Lee and Ashforth (1996) posited that emotional exhaustion is considered as a precursor to depersonalization. Teachers who are less strong-willed and determined and lack persistence in pursuing goals are more likely to display a detached and emotional callousness and become cynical towards their students in order to avoid subsequent stress and resultant strain. According to Watson and Hubbard (1996), neurotic individuals generally engage in ineffective coping strategies, including efforts at denial and distancing themselves from the perceived source of stress.

In accordance with our expectations that the dimensions of extraversion and conscientiousness would be associated to low burnout scores and feelings of increased personal accomplishment, respectively, the results of the present study confirmed our hypotheses. Specifically, teachers with high scores in conscientiousness and

extraversion and low scores in neuroticism were more likely to experience feelings of increased personal accomplishment, and therefore low burnout since, by definition, feelings of reduced personal accomplishment are indicative of burnout. Conscientiousness is a dimension related to involvement, persistence, and is reflective of an individual's need to achieve. It is also related to traits of punctuality and organization, which are significant work attributes, and as such, high scores on conscientiousness predict success at work (Hogan, Hogan, & Roberts, 1996). Extraversion, on the other hand, is related to sociability and high interpersonal relationships, as well as to the level of expectancy motivation. Teachers high in conscientiousness and extraversion, but low in neuroticism, are highly motivated to achieve and therefore obtain gains in performance. All these aspects are very relevant and conducive to goal attainment (greater personal accomplishment) and stressors control (less emotional exhaustion).

Finally, the dimension of openness was found to have a small but significant contribution to the prediction of dimensions of burnout. Results of the present study are in agreement with our hypotheses that openness may buffer the individual from experiencing burnout. Indeed, our findings showed that low scores in openness predicted more feelings of depersonalization, whereas teachers with high scores in this personality dimension reported more feelings of personal accomplishment.

The present study bears the limitations that characterize cross-sectional research based on self-report measures. In addition, the fact that the agreeableness dimension of the Greek adaptation of the NEO-FFI failed to prove reliable and was excluded from further analyses should not remain unnoticed. Were it included, the results may have been different, since previous research has documented linkages between this personality dimension and burnout. It appears though that this limitation is inherent to the adaptation of the NEO-FFI instrument and is extensively discussed in the psychometric study conducted by Panayiotou *et al.* (2004). Nevertheless, we should acknowledge the fact that even with the use of the four dimensions defined by the items suggested in the psychometric study, the findings proved comparable to those of other studies (e.g. Mills & Huebner, 1998).

Despite the above limitations, the present study contributes to the existing body of literature on the stress and burnout in teachers. The results reported here have both theoretical and practical implications. Each burnout dimension has different predictors when personality and environmental factors are considered simultaneously. The preponderance of environmental factors in the prediction of emotional exhaustion appears rather promising since it is easier to control or to change job-related conditions than personal tendencies. The acquisition of strategies focusing on the improvement of teachers' skills in classroom management might be of significance. Indeed, there is evidence to suggest that through professional development, either prior to entering the teaching profession or during teaching, seems to be an important way in combating burnout (Friedman, 2000). The familiarization with action principles for classroom organization in order to prevent stress and burnout stemming from overload, disorganization and disorder has also been proven a useful skill. Finally, time management programmes, in which teachers learn to work more efficiently, may assist them to use a more balanced distribution of time.

In addition, the findings of the present study suggested that certain personality characteristics may increase or hinder the incidence of burnout among teachers. Since it is well documented that certain personality characteristics would predispose people to cope in certain ways when they confront adversity, one could easily trace possible ways in dealing with burnout among teachers by examining what coping responses they use

to deal with work-related stress. In this direction, one might assume that by increasing teachers' awareness on the process of burning out, and providing them with opportunities for reflection on personal variables such as coping resources, together with discussions of alternative coping strategies, may be of great assistance in reducing the use of maladaptive or dysfunctional coping. Indeed, the results of this study showed that teachers high in neuroticism and low in conscientiousness may suffer symptoms of emotional exhaustion and depersonalization. However, although these techniques alone are unlikely to reduce teacher burnout, the development of intervention strategies that focus on job engagement, by providing teachers with experiences that foster professional growth, self-efficacy and perceived success in their career, through the enhancement of their organizational life, appears for many burnout researchers (e.g. Maslach, 2003, Kelchtermans & Strittmatter, 1999) as the key to combat work-related stress.

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