

INVESTIGATING BURNOUT IN GREEK TEACHERS: ARE THERE ANY TEACHERS AT RISK?

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Abstract: The aim of the study was to identify profiles of burnout in Greek school teachers and to investigate the contribution of coping strategies and daily stressors in burnout differences. A total of 1447 primary and secondary school teachers participated in the study. They completed the “Maslach Burnout Inventory” (version for teachers) (Maslach & Jackson, 1986), the “Ways of Coping Questionnaire” (Lazarus & Folkman, 1984) and the “Teachers’ Professional Stress Questionnaire” (Mouzoura, 2005). Cluster analysis showed three groups of teachers as regards burnout, daily stressors and coping strategies. The first cluster comprised teachers with high job stressors, maladaptive coping strategies, high levels of depersonalization and emotional exhaustion, and low levels of personal accomplishment. Teachers in the second cluster reported moderate to high levels of personal accomplishments and emotional exhaustion, whereas teachers in the third cluster were characterized by relative low levels of burnout. The findings of the study are discussed.

Key words: Burnout, Cluster analysis, Primary and secondary education teachers

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INTRODUCTION

Teachers share a significant responsibility in preparing young people to lead successful and productive lives. Teachers can be a source of inspiration and, equally importantly, provide a dependable and consistent influence on young people, as they make choices about further education, work, and life (Vertigan, 2009). Teachers are asked to assume multiple and often contradictory roles, including academic instruction, attending to students' social and emotional well-being, and meeting the often conflicting expectations of parents, students, administration and the community (Burke, Greenglass, & Schwarzer, 1996).

Despite the crucial role of teachers in fostering children's academic learning and social-emotional well-being, addressing teacher stress and job demands in classroom remains a significant challenge in education (Flook, Goldberg, Pingel, Bonus, & Davidson, 2013). It is well documented that teaching is regarded as a stressful occupation and recurring stressors/demands in the teaching environment have been reported by numerous researchers (McCarthy, Lambert, O'Dannell, & Melenderes, 2009). Survey data suggests that one quarter of school teachers view teaching as extremely stressful (Kyriacou, 1987). Consequences of stress and inability to handle job demands are damaging for teachers, students and the education field in general.

One way in which teachers react to these stressors/demands is manifested in a syndrome called burnout (Maslach, 1982; Näring, Briët, & Brouwers, 2006). Burnout is a phenomenon of utmost importance in education (Brouwers & Tomis, 2000). Burnout has been recognized as a widespread problem for teachers and has received a great deal of research attention (Chan, 2003; Maslach, 1982; Maslach & Jackson, 1986). Burnout is conceptualized as a response to stress at work characterized by negative attitudes and feelings toward the people with whom one works (depersonalization attitudes) and toward the profession itself (lack of personal fulfillment at work), together 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, or excessively detached response to other people, who are usually the recipients of one's services or care (Maslach, 1982). Reduced personal accomplishment is described as a person's negative self-evaluation in relation to his or her job performance (Shaufeli, Maslach, & Marek, 1993).

In agreement with the job demands-recourses model (Demerouti & Bakker, 2011; Demerouti, Bakker, Nachreiner, & Shaufeli, 2001) the development of burnout is assumed to follow two routes. 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 certain physiological and psychological cost (Demerouti et al., 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 at the associated physiological or psychological cost and stimulate personal growth and development. In the first route, demanding aspects of work lead to constant overtaxing of one's resources and in the end, to exhaustion. In the second route, lack of recourses constrains meeting of 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). Job resources (external and internal) (Demerouti et al., 2001) and approaches to reduction of stress may play a significant role in the development of burnout as they can mitigate it.

Teacher stress and job demands may be moderated by the use of a number of coping strategies. Approaches to reducing stress may be direct (e.g., changing the source of stress), or indirect (e.g., changing the way one thinks about or physically responds to the stress to reduce impact); also, active (e.g., taking some action to change oneself or the situation) or avoidant (e.g., avoiding or denying the source of stress by engaging in sport activities, relaxation techniques, alcohol consumption) (Kelso, French, & Fernandez, 2005; Lazarus & Folkman, 1984).

Generally speaking, coping strategies used by teachers fall into two main categories: problem-focused and emotion-focused coping strategies (Lazarus & Folkman, 1984). Problem-focused (Lazarus & Folkman, 1984) or task-oriented coping (Endler & Parker, 1990) is defined as tackling a problem directly. It involves strategies that attempt to change the stressful situation and remove its effects. Emotion-focused or emotion-oriented 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. Confrontive coping, seeking social support, and problem solving are all problem-focused (or task-oriented or positive) coping strategies, whereas escape/avoidance and wishful thinking are emotion-focused (or emotion-oriented or negative) coping strategies.

Individual differences in burnout

Burnout is a potential threat to all teachers. Thus, efforts in teacher education to help teachers manage work stress and prevent burnout should target all teachers. Admittedly, some teachers are less impaired or less prone to burnout than others

(Chan, 2003). Factors that impact burnout are personal resources or personality moderators (Chan, 2003), such as job characteristics (e.g., work overload, time pressure), organizational characteristics (role ambiguity, role conflict), and background person characteristics (e.g., age, gender). Such factors act differentially so that teachers show marked individual differences in their reactions to different stressors in the teaching profession.

In Greece, teacher stress and burnout have received increasing attention. There are increasing numbers of studies addressing stressors in teaching and teacher burnout. The vast majority of literature refers to teachers from elementary, intermediate and secondary education (Koustelios, 2001; Koustelios & Kousteliou, 1998; Koustelios & Tsigilis, 2005). The existing body of literature on Greek teachers reports low burnout levels (Kantas & Vassilaki, 1997; Papastyliannou, Kaila, & Polychronopoulos, 2009; Tsigilis, Zournatzi, & Koustelios, 2011). However, a more recent study which was conducted in a context of economic crisis and appraisal of the educational-teaching work (Kamtsios & Lolis, 2016) showed low levels of personal accomplishments and high levels of emotional exhaustion and depersonalization, which are indicative of burnout.

To further investigate burnout, this study, which is part of an ongoing research project, examined the presence of burnout syndrome in a large sample of elementary and secondary education teachers in relation to coping strategies and daily school/academic-related stressors/demands. Our hypothesis was that adoption of different coping strategies is associated with different kinds of appraisal of daily stressors/demands and, as a result, teachers will present different profiles with respect to burnout syndrome, daily stressors/demands, and coping strategies.

METHOD

Data collection

An electronic/web-survey was opted over traditional paper-and-pencil approaches. According to the relevant literature, the three most common reasons for choosing an e-survey are: (a) decreased costs (b) faster response time, and (c) increased response rates (Lazar & Preece, 1999; Simsek & Veiga, 2000). We mailed an electronic link with the questionnaires to the official web-mail address of each school (which was selected to participate in this study) with the request to the school principal to forward the link to the school teachers. Teachers were asked to visit a website (clicking an e-mailed link), and 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 respondent, and reassured that participation was voluntary and confidential.

Participants

Participants in this study were 1,447 teachers from 75 kindergarten, elementary, middle and secondary schools. Using a stratified random procedure, schools were drawn from every large city and two rural areas from ten geographical regions of Greece. The sample consisted of 64.8% females ($N = 939$) and 35.1% males ($N = 508$). The demographic characteristics of the sample are presented in Table 1.

Table 1. Demographic characteristics of the sample

	<i>N</i>	<i>%</i>
Gender		
Males	508	35.11
Females	939	64.89
Age		
>30 years old	121	8.36
31-45 years old	667	46.10
46> years old	412	45.54
Type of school		
Kindergarten	124	8.57
Elementary school	686	47.41
Middle and secondary school	637	44.02
Years in teaching profession		
>10 years	467	32.27
11-20 years	568	39.26
21> years	412	28.47

Measures

Ways of Coping Questionnaire

Coping was measured by the modified version of the “Ways of Coping Questionnaire” (Lazarus & Folkman, 1984), as adapted to the Greek population (Karademas, 1998). This questionnaire assesses thoughts and actions individuals use to cope with stressful encounters of everyday living. The Greek version of the questionnaire consists of 38 questions covering a broad range of cognitive and behavioral strategies applied in order to deal with stressful situations. Participants were asked to rate items across a four-point Likert-type scale (0= “does not apply/not used” to 3= “used a great deal”). Participants (teachers) were asked to assess how frequently they used each strategy

in response to difficulties they had met the previous month in the school environment. The questionnaire consists of five subscales. These subscales are: (1) Confrontive coping (e.g., I expressed anger to the person(s) who caused the problem); (2) Problem solving (e.g., I found two or three solutions for the problem); (3) Avoidance/denial (e.g., Tried to forget the whole thing); (4) Wishful thinking (e.g., Wished that the situation would go away), and (5) Seeking social support (e.g., Talked to someone who could do something concrete about the problem). Conceptually, these subscales represent two underlying dimensions: active or approach/adaptive coping strategies (confrontive coping, problem solving, seeking social support) and emotionally-focused or avoidance/maladaptive coping styles (wishful thinking, avoidance/denial).

Alpha coefficients for the five factors of the “Ways of Coping Questionnaire” were .81, .72, .76, .77, and .60 for confrontive coping, seeking social support, wishful thinking, escape/avoidance and problem solving, respectively (Table 2). We did not check further the psychometric properties of the questionnaire, as it 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; Papastaurou et al., 2011).

Maslach Burnout Inventory

Professional burnout was assessed with the “Maslach Burnout Inventory” (MBI-ED version for teachers), developed by Maslach and Jackson (1986). This scale has been used before with Greek teaching populations (Antoniou, Polychroni, & Vlachaki, 2006; Antoniou, Polychroni, & Walters, 2000; Kamtsios & Lolis, 2016; Kantas, 2001; Kokkinos, 2000; Papastylianou et al., 2009). The three-factor structure of the MBI-ED was confirmed in samples of primary (Gold, Roth, Wright, Michael, & Chin-Yi, 1992) and secondary education teachers (Chang, 2009; Shaufeli, Daamen, & Van Mierlo, 1994). It consists of 22 statements where the respondents identify how often they feel professional burnout on a 7-point Likert-type rating scale ranging from 0 “never” to 7 “every day”. The three dimensions of professional burnout assessed by the tool 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). 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). 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). For emotional exhaustion and depersonalization, high mean scores correspond to higher degrees of burnout. In contrast to the other two subscales, lower mean scores on personal accomplishment correspond to a higher degree of burnout.

Internal consistency of the factors was .87 for emotional exhaustion, .83 for personal accomplishment and .72 for depersonalization. These results were similar with previous studies (Brouwers & Tomis, 2000; Koustelios & Tsigilis, 2005; Maslach & Jackson, 1986; Maslach, Schaufeli, & Leiter, 2001). Furthermore, CFA (using AMOS 16.0 statistical package) was carried out for the purpose of validating and confirming the goodness of fit of the “Maslach Burnout Inventory”. Maximum likelihood (ML) estimation was used to address the possibility of non-normal distribution (Cantoni & Ronchetti, 2006) and to estimate the model parameters and the fit indices. ML has been found to produce more accurate fit indices and less biased parameters than generalizes squares estimation (Olsson, Foss, Traye, & Howell, 2000). The fit of the model to the data was assessed based on the values of multiple fit indices: The comparative fit index (CFI), Goodness-of-fit Index (GFI), Normed Fit Index (NFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). CFI, GFI and NFI values higher than 0.90 indicate a good fit of the data to the model and values higher than 0.95 are considered on excellent fit. The majority of researchers consider that RMSEA and SRMR values lower than 0.05 indicate a very good fit and values up to 0.08 a reasonable fit (Byrne, 2001). Examination of fit indices indicated that the 3-factor model provided a good fit to the data, $\chi^2(206) = 2.771.24$, $p < .001$, CFI = .95, GFI = .94, NFI = .87, RMSEA = .03 (LO = .02, HI = .05), SRMR = .04. These findings suggest that the factorial validity of the questionnaire is supported.

Teachers' Professional Stress Questionnaire

Participants completed the “Teachers' Professional Stress Questionnaire” (Mouzoura, 2005). This questionnaire was developed based on Hui and Chan (1996) and Kyriakou and Sutcliffe (1978) questionnaires. Possible features of the Greek educational system were taken into account during the construction of the questionnaire. The questionnaire comprises 37 randomly ordered statements, assessing six professional stressors: (1) perspective and prestige of teaching profession (11 items) (e.g., Low social recognition of the teaching profession, changes in educational policy); (2) workload and time pressure (7 items) (e.g., High workload, lack of time to complete the curriculum); (3) problems related to students' learning (6 items) (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) (e.g., Absence of materials and teaching tools); (5) problems related to students' behavior (5 items) (e.g., Lack of interest and motivation of students, problems of

student behavior-disobedience, insolence), and (6) relationships between colleagues (2 items) (e.g., Conflicts with colleagues or with the school manager, competition between colleagues). Survey participants responded on the basis of a five-point Likert scale, ranging from 1 to 5. A high score on the 5-point Likert scale indicated that the aspect being assessed by the item was perceived as very stressful by the teachers.

Internal consistency for the five factors of the “Teachers’ Professional Stress Questionnaire” was .88 for perspective and prestige of teaching profession, .86 for workload and time pressure, .75 for problems related to students’ learning, .77 for administrative and organizational issues at school, .77 for problems related to students’ behavior, and .70 for the relationships between colleagues. These results were almost similar with previous studies (Chatzipanagiotou & Marmara, 2013; Kamtsios & Lolis, 2016; Mouzoura, 2005) that reported an acceptable to high Cronbach’s alpha coefficients for all the factors. Likewise, CFA using maximum likelihood estimation was carried out for the purpose of validating and confirming the goodness of fit of the “Teachers’ Professional Stress Questionnaire”. Examination of fit indices indicated that the 6-factor model of the “Teachers’ Professional Stress Questionnaire” provided a good fit to the data, $\chi^2(403) = 2.286.65$, $p < .001$, CFI = .93, GFI = .92, NFI = .85, RMSEA = .04 (LO = .03, HI = .06), SRMR = .05. These findings suggest that the factorial validity of the questionnaire is supported.

Statistical analyses

Cluster analysis

A clustering by cases procedure was used to classify the participants on the basis of their responses to the questionnaires into homogenous groups (Everitt, Landau, Leese, & Stahl, 2011). In order to make a decision about the number of clusters, a hierarchical cluster analysis was carried out following the stages of cluster analysis process (Hair, Anderson, Tatham, & Black, 1998). All variables were standardized using z scores. Standardization prevents variables measured in longer units contributing more toward the distance than the variables utilizing smaller units. Ward’s method selecting the squared Euclidean distance as a similarity measure was chosen. Ward’s method minimizes the within clusters differences and avoids problems with forming long, snake-line chains found in other methods (Hill & Lewicki, 2007). This analysis provides a tree model, a dendrogram, based on the distance between the clusters. On the basis of the dendrogram a three-cluster solution was selected as more suitable.

Once the number of the clusters was decided, a Quick Cluster Analysis was used to form the final groups. Solutions from cluster analysis can be unstable; for this reason, it is advised that additional analyses be used to check the solution obtained (Hill &

Lewicki, 2007). To confirm the clusters a k-means clustering method was used first, the centroid values obtained from the hierarchical methods were used as the initial seed points for the k-means clustering. The final centroid values and the cluster size were compared to those obtained from the k-means cluster analysis and corresponded well with those obtained from the hierarchical cluster analysis, providing confidence for the three cluster solution. One-way ANOVA and Tuckey post-hoc tests were used to explore if there were differences between the three clusters.

The data were analyzed using SPSS20.0 and Amos 16.0.

RESULTS

The mean scores and standard deviations along with Cronbach's alphas for all variables are given in Table 2.

Table 2. Means, Cronbach's α , split-half, and number of items of the factors of the questionnaires

	Construct	M (SD)	Cronbach's α	Split- half	Number of items
<i>Questionnaire of Teachers'</i>					
<i>Professional Stress</i>					
<i>Subscales</i>					
1	Perspective and prestige of teaching profession	3.63 (.80)	.88	.82	11
2	Workload and time pressure	3.28 (.91)	.86	.84	7
3	Problems related to students' learning	3.15 (.74)	.75	.70	6
4	Administrative and organizational issues at school	3.45 (.81)	.77	.74	6
5	Problems related to students' behavior	3.56 (.78)	.77	.68	5
6	Relationships between colleagues	2.93 (1.10)	.70	.70	2
<i>Ways of Coping Questionnaire</i>					
<i>Subscales</i>					
1	Confrontive coping	2.96 (.48)	.81	.74	11
2	Seeking social support	2.84 (.58)	.72	.72	6
3	Wishful thinking	2.21 (.63)	.76	.77	8
4	Escape/avoidance	2.36 (.54)	.77	.71	9
5	Problem solving	2.16 (.52)	.60	.52	4
<i>Maslach Burnout Inventory</i>					
<i>Subscales</i>					
1	Emotional exhaustion	28.76 (8.57)	.87	.79	9
2	Personal accomplishment	34.51 (6.06)	.83	.60	8
3	Depersonalization	9.84 (3.76)	.72	.69	5

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As a preliminary analysis, Pearson's bivariate correlations were computed in order to explore relationships between scales and factors. Correlations among the measures are presented in Table 3. The bivariate relations exhibited a predictable pattern of results. As can be seen, all the stressors were significantly correlated with emotional exhaustion and depersonalization, while personal accomplishment was negatively correlated with these stressors. Further significant relations emerged among personal accomplishment and coping strategies. Personal accomplishment was significantly and positively correlated with confrontive coping, whereas emotional exhaustion was positively correlated with wishful thinking and escape/avoidance coping strategies. Additionally, depersonalization was significantly but negatively correlated with confrontive coping and significantly but positively correlated with wishful thinking and escape/avoidance coping strategies.

Table 3. Bivariate Pearson correlations matrix for the variables considered in the study

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Stressors	1 Perspective and prestige of teaching profession	.60**	.54**	.65**	.50**	.46**	.38**	-.09*	.17*	.04	.13*	.10*	.19**	.09
	2 Workload and time pressure		.53**	.50**	.46**	.45**	.48**	-.19**	.21**	.02	.15**	.25**	.27**	.12*
	3 Problems related to students learning			.45**	.62**	.35**	.32**	-.18**	.26**	.02	.15**	.25**	.23**	.06
	4 Administrative and organizational issues at school				.37**	.38**	.24**	-.02	.08	.09	.16**	.19**	.15**	.10*
	5 Problems related to students' behavior					.35**	.42**	-.33**	.28**	-.08	.13*	.20**	.20**	.05
	6 Relationships between colleagues						.25**	-.11**	.11*	.01	.19*	.18*	.18*	.12
Burnout	7 Emotional exhaustion							-.41**	.50**	-.16*	.06	.25**	.25**	.09
	8 Personal accomplishment								-.44**	.45**	.06	-.01	-.10*	.06
	9 Depersonalization									-.15*	.09	.13*	.27**	.05
Coping strategies	10 Confrontive coping										.33**	.23**	.15*	.28**
	11 Seeking social support											.33**	.14*	.29**
	12 Wishful thinking												.49**	.28**
	13 Escape/avoidance													.14
14 Planful problem solving														

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

Burnout profiles of teachers

A cluster analysis by cases to classify the participants on the basis of their response to the questionnaires was carried out. As a result of this analysis three groups of teachers were identified (see Table 4). The first group ($N = 273$), labeled “high burnout group”, comprised teachers with high levels of emotional exhaustion and depersonalization, and low scores of personal accomplishments. Teachers in Cluster 1 scored high in stressors associated with students’ learning and behavioral problems. They also had the highest scores in maladaptive coping strategies, such as wishful thinking.

The second group was labeled “medium burnout group”. This cluster consisted of 642 teachers. Members of Cluster 2 expressed more personal accomplishment compared to the first group. Although they scored lower than the first group in emotional exhaustion, however they reported feelings of being high emotionally exhausted in work. They also expressed low levels of depersonalization. Furthermore, teachers in the second cluster scored higher than the other two clusters in stressors such as perspective and prestige of teaching profession, workload and time pressure, and administrative/organizational issues at school. They also reported the highest score in social support as a coping strategy.

Cluster 3 comprised 532 teachers. Teachers in this group had low scores in the two dimensions of professional burnout (i.e., low emotional exhaustion and depersonalization) and high scores in personal accomplishments. These teachers seem to adopt more problem-focused coping strategies in order to deal with daily stressors. They also had the lowest score in all stressors.

Table 4. Three-cluster analysis results

	Clusters			<i>F</i>	<i>p</i>
	Cluster 1 (<i>N</i> = 273)	Cluster 2 (<i>N</i> = 642)	Cluster 3 (<i>N</i> = 532)		
Perspective and prestige of teaching profession	2.82	3.91	2.45	90.67	< .001
Workload and time pressure	3.00	3.29	1.00	172.44	< .001
Problems related to students’ learning	3.33	3.00	1.50	73.1	< .001
Administrative and organizational issues at school	2.17	4.00	2.17	36.14	< .001
Problems related to students’ behavior	4.60	3.40	1.00	144.73	< .001
Relationships between colleagues	5.00	2.50	1.50	40.95	< .001
Emotional exhaustion	53.00	43.00	10.00	2535.20	< .001
Personal accomplishment	14.00	38.00	48.00	315.99	< .001
Depersonalization	29.00	8.00	7.00	323.69	< .001
Confrontive coping	2.27	3.45	3.73	36.84	< .001
Seeking social support	3.60	3.81	2.83	1.09	.030
Wishful thinking	3.13	2.25	2.00	37.75	< .001
Escape/avoidance	3.22	3.44	1.78	44.15	< .001
Problem solving	2.00	2.50	2.75	3.28	.038

DISCUSSION

The results of the study suggest that teachers represent a heterogeneous population with respect to burnout syndrome, daily stressors, and coping strategies. The results revealed that the development of burnout is determined by a specific constellation of working conditions. When job demands/stressors are high and adaptive coping strategies are lacking, teachers experience increased emotional exhaustion and depersonalization. On the other hand, when teachers use positive cognitive appraisal of stressors and adaptive coping actions, job demands/stressors are low and they experience low levels of burnout.

Specifically, the cluster analysis revealed three teacher profiles. Teachers in the first cluster represent teachers “at risk”, as members of this cluster had the lowest score in personal accomplishment and the highest scores in emotional exhaustion and depersonalization. In other words, according to the categorization used by Maslach and Jackson (1986) the higher the degree of experienced burnout, the higher the scores on emotional exhaustion and depersonalization and the lower the scores on the personal accomplishment subscale. Therefore, these teachers belong to a high burnout group. The higher levels of emotional exhaustion, compared with the other two groups, probably suggest that teachers in Cluster 1, either had not acquired or cannot utilize the suitable psychological-coping resources, geared to the demands of the profession. High burnout teachers rated problems related to students’ learning and students’ behavior (in-class/interpersonal stressors) as being the factors that caused them the most of the stress. According to prior research, the relationships a teacher has with students (Kokkinos, 2000) and the teacher’s perceptions of classroom demands and personal resources have an impact on depersonalization and emotional exhaustion. On the other hand, students’ achievement has also been related to teacher burnout and depersonalization (Fives, Hamman, & Olivarez, 2007). Problems in student learning (e.g., low achievement, difficulties in learning) may increase teachers’ stress, as teachers may think about how they interact with the students, may be immersed in these classroom situations, and may be not aware which students require additional instruction and support (McCarthy et al., 2009). Further, many teachers see the teaching practice as the ultimate test of their teaching abilities (Fives et al., 2007) and make a connection between teaching quality and student achievement (Hightower et al., 2011).

Teachers who do not have any positive effect on students’ learning and development (Hightower et al., 2011), may increase their stress and develop maladaptive tendencies, such as depersonalization, as an unconscious process to “protect” themselves. Interpersonal stressors and the use of maladaptive coping

strategies may contribute to teachers' emotional exhaustion and depersonalization. These stressors may create habitual patterns in teachers' judgments about student behavior and student learning, and may contribute significantly to teachers' repeated experience of unpleasant emotions. These emotions may then lead to burnout (Chang, 2009).

Teachers, in Cluster 2, reported moderate to high levels of personal accomplishment and emotional exhaustion. At the same time, they had lower scores in depersonalization compared to teachers in Cluster 1. Factors likely to be associated with emotional exhaustion in Cluster 2 include mainly workload and time pressure, administrative and organizational issues at school, and organizational factors, such as perspective and prestige of the teaching profession. This finding is in agreement with evidence showing that, in the teaching profession, burnout is affected by environmental and job-related contextual factors, such as workload and time pressure (Abel & Sewell, 1999; Goddard, O' Brien, & Goddard, 2006; Mears & Cain, 2003). Specific job demands, such as workload, have been repeatedly found to predict emotional exhaustion among various occupational groups (Bakker, Demerouti, & Euwema, 2008).

In this study, time pressure was defined as teachers' feelings of having a heavy workload, having to prepare for teaching in the evenings and weekends, and having hectic school day with little time for rest and recovery. Given this definition, it is not surprising that time pressure was related to emotional exhaustion for teachers in Cluster 2. This finding is in agreement with Peeters and Rutte's (2005) research, which showed that for teachers operating in an environment of high job demands, those who were able to manage their time well demonstrated lower levels of exhaustion than their colleagues with low time-management abilities. When the school environment lacks resources, and stressors, such as workload and time pressure, are high, individuals cannot cope with the negative effects of the environmental demands (e.g., workload). In such a situation, a decrease of motivation and withdrawal from the job can be an important self-protection mechanism that prevents future frustrations of not achieving work-related goals (Demerouti & Bakker, 2011; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007).

Teachers in this cluster also scored high in the stressor referring to the perspective and prestige of teaching profession. This stressor has been defined by Hargreaves and Flutter (2013) as the public perception of the relative position of an occupation in a hierarchy of occupations. Teacher prestige and status is related to aspects of quality education considering that high occupational prestige and status is of critical importance to educational systems. In crisis-affected European countries, such as Greece, the status of teachers has declined dramatically in recent years, mainly as a

result of austerity measures imposed by governments, as well as a result of neoliberal trends in education. Teaching also does not guarantee a career progression in most countries. For this reason, educational policy makers should prioritize recommendations such as career progression opportunities, educational support, promotion of a positive image for teachers and their organizations etc. In such a case teacher personal accomplishment will be strengthened with a direct impact on education (Hargreaves et al., 2006; Symeonidis, 2015).

Teachers in Cluster 3 were characterized by relatively low levels of burnout. They scored higher than the other two groups in personal accomplishment, whereas they had the lowest score on emotional exhaustion and depersonalization. It is likely that teachers in Cluster 3 experience lower levels of burnout as a consequence of their positive cognitive appraisal of stressors and the use of adaptive coping strategies to deal with them. These teachers probably work in such a way as to decrease stressors or job demands in the teaching environment during the student-teaching practice and may have a greater control in their student-learning and teaching experiences. It seems that the affective coping strategies (problem-focused strategies) that teachers from Cluster 3 used functioned as personal resources and reduced the impact of stressors. This is in line with the existing literature as problem-focused coping strategies moderate daily hassles and facilitate performance (O' Connor, Conner, Jones, McMillan, & Ferguson, 2009; Robyn & Copeland, 2001). According also to the job demands-recourses model (Demerouti et al., 2001), adaptive coping strategies (as personal recourses) buffer the relationship between job demands/stressors and exhaustion (Xantopoulou et al., 2007). These teachers may also have stress resistance resources, personality traits and background characteristics which may contribute to the lower levels of burnout, mainly strengthening individuals' sense of his/her ability to control and impact upon their environment successfully (Hobfoll, Johnson, Ennis, & Jackson, 2003). Furthermore, according to Bibou-Nakou, Stogiannidou, and Kiosseoglou (1999), teachers' personal accomplishment is higher in teachers who attribute students' disobedience to internal student-related factors. That is to say, teachers who did not take students' disruptive behavior personally (e.g., stressors related to students' behavior) reported higher personal accomplishment in teaching and thus less feeling of burnout.

In terms of coping strategies, the present research indicated that teachers who cope using a maladaptive /avoidance approach (e.g., teachers in Cluster 1) tend to report higher levels of stress and burnout. This is in line with previous research (Chang & Davis, 2009; Mears & Cain, 2003; Pierce & Mollou, 1990). Maladaptive coping strategies are basically means of escaping from stressful situations or denying

that the situation is stressful. They are not strategies that attempt to appraise and resolve the stressful aspects of the situation a person confronts. On the basis of the present research it cannot be said whether teachers (mainly in Cluster 1) are more likely to experience high levels of burnout because they use maladaptive coping strategies, or whether they are more likely to use maladaptive coping strategies because they experience high levels of burnout. Since maladaptive coping strategies are generally regarded as being ineffective ways to deal with stressful situations (DeLongis & Holtzman, 2005; Kobasa, Maddi, & Puccetti, 1982), it would be useful to know about the circumstances that contribute to their development, so that appropriate intervention programs are implemented. Further, the present findings (e.g., concerning Cluster 3) confirm that effective coping strategies are an important asset to reduce the impact of stress.

Teachers' perceptions of social support appear to have a strong link with teacher burnout in the first and the second group. Overall, teachers in the first and the second cluster adopted social support as a coping strategy more than the teachers in the third cluster. This is in contrast with Pierce and Mollou (1990) who found that high burnout teachers reported lower social support than did low burnout teachers. On the other hand, Sheffield, Dobbie, and Carroll (1994) reported that social support did not have any impact on teacher stress. According to prior research, social support helps reduce the negative effects of stress (Bulger & Amarel, 2007; Cohen & Wills, 1985) as social support is generally regarded to moderate the impact of stressors; however, this was not the case for teachers in Cluster 1 and 2. This was an interesting finding in light of the associations between teacher stress and social support at work. The effects of support seeking presumably depend on the quality of the support that is mobilized (Griffith, Steptoe, & Cropley, 1999). Teachers who actively seek support as a coping strategy may come across both helpful and unhelpful social contacts. Alternatively, it is possible that seeking social support moderates the impact of teacher stress on well-being without affecting the perception of stress per se (Griffith et al., 1999). It can be assumed that factors not considered in this research, such as personality characteristics (e.g., hardiness), or perceptions of working environment (e.g., perceived support from colleagues), play a crucial role in the intensity of teachers' stressors. Furthermore, according to Chang (2009), social support provides opportunities for reappraisal and adaptive responses to work stress thereby easing burnout. Positive support is associated with less burnout because positive reappraisal and the formation of adaptive responses are supported by positive communication. However, teachers' coping efforts can fail if the communication with others focuses on negative topics.

In conclusion, the major strength of the present study was the use of a large

teacher sample based upon a representative sample of schools. This adds to the ecological validity of the finding that there were three teacher groups in relation to burnout syndrome, coping strategies, and daily stressors. The findings support Maslach and Jackson's theory (1986) that emotional exhaustion lies at the heart of burnout (see Cluster 1 and 2) and the job demands-resources model (Demerouti & Bakker, 2011) that high job demands/stressors are primarily and positively related to emotional exhaustion and depersonalization (see Cluster 1). The results of the study can inform researchers designing interventions for school teachers, in order to prevent and/or decrease burnout in education and enhance adaptive coping strategies for dealing with daily stressors. Such interventions could be aimed at the modification of stressors in high risk burnout teachers in order to alleviate burnout characteristics. Interventions could also target high risk for burnout teachers in order to adopt effective and multiple coping strategies to regain their composure and proactive stance in classroom problems.

Changes in educational policy are also necessary in order to improve the lives and experience of teachers (Evers, Brouwers, & Tannis, 2002), leading to lower stress and burnout levels. In order to understand the psychological processes related to teachers' burnout, future research should distinguish between the different components of teacher burnout. Researchers may conceptualize emotional exhaustion and depersonalization as separate constructs that are influenced by different processes but which affect each other in a reciprocal manner. Longitudinal studies are necessary to increase our understanding of these processes and also to investigate the development of stress and burnout among teachers. We also need a deeper understanding of the environmental and personal factors that may serve to influence burnout and burnout coping strategies (Chan, 2003) in different teacher groups.

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