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Promoting Work Well-being: Professional Burnout & Occupational Stress

Edited by: Alexander-Stamatios Antoniou

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Promoting Work Well-being:
Professional Burnout & Occupational Stress

Work Stress and Professional Burnout in Primary and Secontary Education in Greece*

Chapter 5

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Introduction

Research on stress and burnout among teachers has recently received considerable attention. Numerous studies have explored the specific conditions that make teaching stresful. These conditions can be categorised either as exogenous pressures (i.e. unfavourable occupational conditions, excessive workload, lack of collaboration etc.) or endogenous pressures (i.e. individual personality characteristics, disappointment and frustration that probably stem from unrealistic expectations that teachers hold etc.). A long term consequence of stress is occupational burnout, which is defined as a syndrome that results from chronic and extended occupational stress, characterised by physical, emotional and attitudinal exhaustion (Kyriacou, 1987). Teachers increasingly feel that they cannot deal with the particularly intense stressors of their job. The consequences of occupational stress and burnout are particularly grave for individuals who work in health services and social services (Antoniou, 1999; Antoniou, Davidson, & Cooper, 2003) and it has been a major concern of human service and helping professionals.

Teaching has been regarded as one of the most stressful occupations. A study by Travers and Cooper (1993) that classified several occupations in terms of the degree of stress that these cause on the employees concluded that, as far as the occupations of social welfare are concerned, teachers experience the highest levels of stress (in second place came the job of the social worker). Moreover, in Firth- Cozens's and Payne's (1999) review of 43 studies carried out in the United States between 1979-

1998, teachers were classified first in terms of levels of emotional exhaustion compared with other professional groups of the study. It has been established that teachers with high levels of professional burnout provide less information to their students, use support in a lower degree, are less receptive in their student's opinions and generally present lower levels of interaction with them (Manchini, Wuest, Clark & Ridosh, 1984). In addition, professional burnout has been related to a number of negative cognitive characteristics, such as reticence, feelings of exhaustion that are expressed with the tendency for disengagement and reduction of the intensity caused by the contact with students, dissatisfaction and malaise (Friedman, 1995).

The study of teacher stress utilises specific models based on individual differences, and especially the model of Lazarus and Launier (1978) and its adaptation in the educational field by Kyriacou and Suttcliffe (1978). According to this model, stress results from teachers' perception that: a) demands are being forced upon them, b) they are unable to or have difficulty in meeting these demands, and c) failure to do so threatens their psychological and or physical well being. The key element is how teachers themselves perceive threat (either this is self-imposed or imposed by others).

The frequent and consistent exposure to stress usually results into strain, job dissatisfaction, absenteeism and general disorganisation. Teachers' reactions to stress vary and mainly include physical (i.e. headaches, migraines, gastric ulcer and tachycardia, sleep disturbances), psychological (depression, anger, feelings of frustration and low self-esteem) and behavioral symptoms (deterioration in work performance, absenteeism).

Factors related to teachers' occupational stress and professional burnout

A considerable number of studies both in mainstream (Borg & Falzon, 1989; Brouwers, & Tomic, 2000; Jaoul, Kovess, & Mgen, 2004) and in special education settings (Antoniou, Polychroni, & Walters, 2000; Hastings & Brown, 2002; Jennett, Harris, & Mesibov, 2003) and at primary and secondary level (Carlile, 1985; Cooper & Kelly, 1993) have identified the major sources of teachers' occupational stress. These factors can be categorized as follows: a) factors that directly concern the nature of teaching profession, b) individual differences that influence teachers' vulnerability against stress, and c) administrative factors that are related to the school organisation and administration.

The actual teaching function itself can be a source of stress and burnout. In an attempt to isolate the most meaningful stressors affecting teachers, most studies

have found that the major stress factors are anchored in the in-class structure rather than in the organizational structure. The literature reveals that the most significant stressors for teachers apparently stem from disciplinary problems (i.e. student misbehaviour), class heterogeneity (i.e. large classes with students with various academic levels), and overload (i.e. individuals feel that the work role is too difficult or too heavy for them) especially if undertaking duties over and above the job description (Forlin, 2001; Lewis, 1999; Male & May, 1998; Morton, Vesco, Williams & Awender, 1997; Pithers & Soden, 1998). Schwab and Iwanicki (1982) found that role conflict and role overload of teachers were associated with elevated levels of burnout.

Some researchers have focused on more specific stressors in teaching, such as difficulties in interaction with students, time constraints, and excessive paperwork. Burke, Greenglass and Schwarzer (1996) found that administrators' burnout was mainly due to bureaucracy, whereas teachers' burnout was primarily predicted by stressors such as disruptive students, followed by social isolation. Similarly, Pierce and Molloy (1990) and Burke and Greenglass (1995) found that lack of supervisors' support was a predictor of teachers' burnout.

As regards the age of students in the classroom, it has been found that secondary school teachers frequently experience reduced levels of personal accomplishment in comparison with primary school teachers (Anderson & Iwanicki, 1984). Teaching younger students may be a less demanding task and may lead to feelings of higher satisfaction, because young pupils are generally more appreciative of their teachers' efforts compared to older students (Burke & Greenglass, 1989).

A number of studies have investigated the influence of individual factors on teachers' vulnerability to occupational stress. Bibou, Stogiannidou and Kiosseoglou (1999) examined the importance of stress attribution in a sample of 200 teachers and found that teachers who tended to attribute classroom difficulties to themselves, presented significantly higher levels of burnout. Moreover, teachers' self-efficacy, identified as the degree to which teachers believe that they hold the exclusive responsibility for each student's school performance (Coladarci, 1992; Hoy & Woolfolk, 1993) has also been the focus of research. The findings by Friedman (2000) showed that as soon as teachers realised that their overly optimistic expectations about their future teaching performance and role fulfillment were infeasible, their self-efficacy scores decreased ("shattered dreams of an impeccable professional performance" op.cit., p.595). Moreover, studies that investigated the relationship between self-efficacy and burnout have concluded that self-efficacy has a direct impact on teachers' levels of emotional exhaustion and reduced personal accomplishment, and a long-term influence on the feelings of depersonalisation that

they display towards their students (Brouwers & Tomic, 2000; Evers, Brouwers & Tomic, 2002).

As far as individual characteristics are corcerned, clinical studies have indicated that they are associated with the experience of stress. Friedman and Rosenman (1974) have discriminated between type A and type B personality, pointing out that individuals with type A personality are particularly prone to stress. In addition, other studies investigated the way that stress levels differ in relation to age and gender. In general, despite the hypothesis that the most experienced teachers would find their job less demanding and, as a result, they would experience less stress, it was revealed that as teachers became older, they became less patient with children and they experienced more stress (Borg & Falzon, 1989).

In contrast with this finding, Byrne (1991) found that younger teachers presented higher levels of emotional exhaustion and depersonalisation as compared to their older colleagues and this finding is consistent with the relevant literature. As Pines and Aronson (1988) have interestingly reported, teachers in the beginning of their career usually invest a great deal of energy in order to achieve their initial objectives, while simultaneously they have to deal with a number of stressful and intense demands from their environment. If they feel that they fail to decrease the existing gap between desired goals and materialisation, this may have an adverse effect on levels of job satisfaction, as well as decreased levels of involvement and effort. This reaction is probably related with the young teachers' difficulty to activate the appropriate coping strategies in order to reduce the occupational stress imposed by the difficulties of their job (Travers, in press). Nevertheless, the stress experienced at the beginning of a young teacher's career is related with his/her adaptation in the profession and appears not to have long-lasting repercussions (Cherniss, 1992).

Finally, numerous studies have indicated that female teachers experience higher levels of stress and higher job dissatisfaction that generally stem from the negative conditions in the classroom and the students' behaviour, as well as work-family interface (Georgas & Giakoumaki, 1984; Kantas, 2001; Papastylianou, 1997). In general, females experience particularly higher levels of occupational stress regarding gender-specific stressors and have different ways of interpreting and confronting with problems deriving from their occupational environment (Offerman & Armitage, 1993). These stressors may originate from the mentality of the broader society (e.g. combination of work and family), the working conditions (e.g. gender discriminations) and the female gender itself (e.g. self-esteem, self-monitoring). The evaluation and interpretation of these differences is a difficult task because other factors appear to be involved in this process, such as the workload, the posi-

tion in the hierarchy of the school and the social support (Borrill, Wall, & West 1996; Greenglass, 1991).

In addition, administrative factors that are considered to contribute to occupational stress and burnout in teachers mainly refer to the conditions that prevail in the educational institution and in the general educational environment. A systematic review of the literature confirms that these factors are responsible to a large extent for teachers' stress and burnout (Forlin, 2001). Limited support from the government, inadequate training, lack of information on contemporary educational issues, continuous changes in the curriculum and excessive demands from school administration and dificulty in interacting with parents, constitute serious sources of stress and exhaustion for teachers (Travers & Cooper, 1997). Furthermore, insufficient funding for education has a number of serious consequences, in terms of the school infrastructure and equipment, the duration and the quality of teacher training and a generalised feeling of the teacher's role being undervalued.

Finally, at the institutional level, the lack of support between colleagues and the difficulty in creating relationships of collaboration have been found to affect the levels of stress that teachers experience (Evans & Fisher, 1993). It is generally believed that teachers develop negative emotions and professional dissatisfaction in cases where relationships with colleagues are competitive and conflicting, there are difficulties in communication between them and the superiors and they feel that do not participate in decision-making (Dussault, Deaudelin, Royer, & Loiselle, 1999; van Dick & Wagner, 2001).

Although there is considerable lack of research in the Greek educational field, it is worth mentioning that the few available studies regarding the levels of occupational stress and burnout of Greek teachers (Alexopoulos, 1990; Antoniou, Polychroni & Walters, 2000; Kantas, 2001; Papastylianou 1997), have indicated that Greek teachers experience considerably high levels of stress and psychosomatic symptoms (such as physical exhaustion and tiredness, insomnia and headaches). These stem mainly from problematic relations with colleagues and headeachers, low wages, ineffective coping strategies and heavy workload.

In order to further explore the issue of stress and burnout in the Greek population, the present study aimed at: a) the identification of the specific sources of occupational stress that apply to Greek primary and secondary teachers, b) the assessment of levels of professional burnout that teachers experience and c) the prediction of burnout by personal and organisational variables. This paper will mainly focus on individual differences in terms of age and gender.

Method

Sample

493 Greek teachers of public primary and secondary schools working in large cities in Greece participated in the study. 43.8% of the sample were males and 56.2% were females. The teachers' age ranged from 25 to 65 with 15.6% aged up to 30 years, 28% 31 to 40 years, 34.7% 41 to 50 years, and 21.7% of the sample over 51. The majority of teachers were married (79.1%) and 34.12% had been teaching from 1 to 10 years, 28% 11 to 20 years, 31.5% 21 to 30 years, while a smaller percent of 6.9% had longer teaching experience (31 to 35 years). Finally, 49.7% were primary school teachers (age of children taught: 6 to 12 years), while the remaining of the sample (50.3%) was constituted of high school teachers (age of children taught: 12 to 18 years). Regarding their administrative duties, 22.2% of the teachers were deputy headteachers (8.9%), 7.3% were headteachers and 2.0% were supply teachers.

Measures

Outcome Variables

Occupational Stressors. A questionnaire on the specific sources of teachers' occupational stress was used, which included 30 statements referring to particular stressful situations for teachers. These sources were selected based on relevant literature on teachers'stress and on the analysis of pilot semi-structured interviews with twelve teachers of primary schools and high schools. Participants could respond on a six-point Likert-type scale ranging from 1 "it is not stressful at all" to 6 "it is very stressful". The questionnaire comprises items including behavioural problems and low student achievement, occupational conditions, time pressure and relationships with colleagues. The internal consistency of the questionnaire (Cronbach's alpha) was calculated at $\alpha=.92$.

Professional Burnout. Burnout was assessed by the Maslach Burnout Inventory (MBI-ED version for teachers) developed by Maslach & Jackson (1986). This widely used scale consists of 22 statements where the respondents identify how often they feel professional burnout at a six-point Likert-type rating scale ranging from 0 "never" to 6 "every day". The Cronbach's alpha reliability was 68. The three dimensions of professional burnout assessed by this tool are: a) emotional exhaustion, which comprises nine items referring to the reduction in psychological resources that teachers experience, so that they do not have the ability to offer emotionally to their students (e.g. "I feel emotionally empty in my work"), b) depersonalisation, which comprises five items referring to teachers' negative and cynical behaviour against s-

tudents (e.g. I don't care what happens in some of my students) and c) reduced personal accomplishment, which comprises eight statements referring to the tendency of some teachers to have a negative self-esteem, particularly concerning their job and the services that they offer, as well as a generalised feeling of sadness and disappointment in relation to the results of their job (e.g. I deal very effectively with the problems of my students). This scale is the most popular tool for measuring levels of burnout and has been employed in a considerable number of Greek and international studies with a substantial number of occupations, such as civil servants, doctors and teachers in special and mainstream schools (Antoniou, Polychroni, & Walters, 2000; Kantas, 2001).

Predictor Variables

Personal and job demographics: Teachers were asked to fill in a detailed biographical questionnaire with information on gender, age, grade, administrative duties, teaching experience, class size, teaching hours per week, hours for preparation and marking, etc.

Statistical analyses

Principal components factor analysis was carried out to investigate the structure of the occupational stressors questionnaire. Following this, means and standard deviations were calculated for the three dimensions of burnout. Scores in the upper range of the distribution formed the "high emotional exhaustion/depersonalisation/reduced personal accomplishment" group, scores in the lower range formed the "low emotional exhaustion/depersonalisation/reduced personal accomplishment" group and scores in the middle range formed the "moderate" group. This process was necessary in order to investigate whether the categorisation proposed by Maslach and Jackson was confirmed. Bivariate correlations were performed of the dependent variables of the study (stress factors and dimensions of burnout) and the personal and job demographics variables.

In order to investigate which of the independent variables best predicted burnout, stepwise regression analysis was carried out. The requirements for regression were evaluated, namely, ratio of cases to independent variables, the normality, linearity and homoscedasticity of the residuals and the multicollinearity. Gender, number of pupils in school and number of teachers in school were not included in the analysis. The demographic variables were entered as a first block, the sources of stress were entered as a second block of independent variables and the three dimensions of professional burnout were entered as dependent variables.

Results

The teachers of the present study reported moderate to high levels of stress on average, scoring from 3 and above (3=moderate stress, 4=high levels of stress) at the 6-point scale of the questionnaire in the majority of the statements. Table 5.1 illustrates the descriptive statistics for the major sources of stress in order of most to least important.

The most highly rated sources of stress refer to problems in interaction with students such as the large number of pupils in the classroom, the lack of interest from the part of the pupils, handling students with "difficult" character and the slow progress of certain students. The fifth source of stress is the lack of resources and equipment which constitutes a factor related to the school environment.

The factorial structure of the sources of occupational stress after performing principal components analysis with varimax rotation with eigenvalues >1, extracted six factors explaining 45.7% of the total variance. The eigenvalues for the factors were 8,96, 1,70, 1,52, 1,52, 1,31 and 1,14 respectively. Factor One, "in-class problems and recognition by others", included 6 items that referred to discipline problems, time and effort devoted to a limited number of students, lack of parental recognition of teachers' work, and work/family interface (explained variance=29.88%, α=.80).). Factor Two, "interaction with students and colleagues" consisted of 6 items that referred to the lack of involvement in school decisions, difficult relationships with colleagues, inadequate training and the continuous need for decision-making in the classroom (explained variance=5,66%, α=.79). Factor Three, "teachers' workload", consisted of 6 items that concerned chores over and above the teachers' role, lack

Table 5.1 Means, standard deviations of occupational stress for the total sample (N=493) and in terms of gender (males=216, females=277)

Sources of Stress	M	SD	Median	Males (M,SD)	Females (M,SD)
1 Large number of students in the classroom	4.47	1.23	5.00	4.31 (1.4)	4.60 (1.1)
2 Little interest of certain students	4.43	1.02	4.00	4.34 (1.1)	4.51 (.99)
3 Students with "difficult" character	4.42	1.24	4.00	4.23 (1.4)	4.57 (1.1)
4 Lack of progress by certain students	4.27	1.06	4.00	4.12 (1.1)	4.38 (1.0)
5 Serious lack of means and equipment	4.26	1.08	4.00	4.18 (1.1)	4.33 (1.0)

Scale: 1=It is not stressful at all, 2= Generally it is not stressful, 3=It is slightly stressful, 4=It is generally stressful, 5=It is very stressful, 6=It is extremely stressful

of teaching assistants, strict adhesion to the program (explained variance=5,07%, α=.73). Factor Four, "students' progress", included 5 items that referred to slow progress and limited interest by pupils, limited time for one-to-one teaching (explained variance=5,07%, α=.74). Factor Five, "government support", consisted of 3 items that referred to the lack of support by the governement (explained variance=4,36%, α=.57). Finally, Factor Six, "continuous demands from teaching", consisted of 4 items that referred to the stress resulting by the continuous evaluation of students, and the feeling of being responsible for students (explained variance=3,79%, α=.68). One item referred to the way that teachers' professional status was depicted in society.

Regarding the teachers' levels of burnout, three groups were formed ("high" "moderate" and "low") in each dimension of professional burnout, according to the categorisation used by Maslach & Jackson using the actual scores of the distribution of the present study. Scores in the upper range of the distribution formed the "high emotional exhaustion/depersonalisation/reduced personal accomplishment" group, scores in the lower range formed the "low emotional exhaustion/depersonalisation/reduced personal accomplishment" group and scores in the middle range formed the "moderate" group. According to the distribution of the sample, 32% of teachers experienced high levels of emotional exhaustion (<17=low, 18-26=moderate, >27=high), 32.3% experienced high levels of depersonalisation (<2= low, 3-5= moderate, >6= high), and 31% experienced significantly reduced personal accomplishment (>39= low, 38-35= moderate, <34= high). It is worth noting that the levels of depersonalisation of this sample are lower in comparison with the American norms. The intercorrelations among the study variables, means, standard deviations, and Cronbach alpha coefficients are presented in Table 5.2.

The effect of the independent variables (personal and job demographics) on the sources of stress and the professional burnout was examined using univariate and bivariate analysis of variance (Table 5.3). A significant effect of gender was found in three stress factors namely, "interaction with students and colleagues", $F(1,491)=7,74$, $MSE=26,93$, $p<.01$ ($\eta^2=.024$), "teachers' workload", $F(1,490)=11,94$, $MSE=24,40$, $p<.001$, $\eta^2=.020$, "students' progress", $F(1,491)=16,43$, $MSE=16,13$, $p<001$, $\eta^2=.018$. Female teachers reported higher degree of stress compared to males on all three sources of stress regardless of their chronological age and type of school they were teaching in (primary or secondary). Whereas the most highly rated sources of stress differed for the two genders, as for male teachers it was the students' decreased interest and for females it was the overcrowded classrooms, these results indicated that both men and women teachers agreed that problems in the classroom were the

Table 5.2 *Means, standard deviations, and intercorrelations among study variables (N=493)*

Variable	Means	S.D.	Burnout Rating	1	2	3	4	5	6	7	8	9
Stress												
1. In-class problems and recognition by others	23.03	5.04	_									
2. Interaction with students and colleagues	20.43	5.22		.59**	_							
3. Teachers' workload	22.20	4.99		.57**	.57**	_						
4. Students' progress	21.59	4.08		.60**	.57**	.51**	_					
5. Government support	11.80	2.67		.34**	.34**	.43**	.37**	_				
6. Continuous demands from teaching	15.86	3.60		.58**	.49**	.52**	.52**	.39**	_			
Burnout												
7. Emotional exhaustion	22.36	10.39	Moderate	.39**	.24**	.36**	.36**	.24**	.41**	_		
8. Depersonalisation	5.19	4.94	Moderate-high	.21**	.15**	.13**	.13**	.03	.19**	.50**	_	
9. Reduced personal accomplishment	35.94	5.83	Moderate	−.06	−.04	.03	.01	.07	−.06	−.12	−.37**	_

** P <.001

Scale assessment: Emotional exhaustion: <17=low, 18-26=moderate, >27=high.
Depersonalisation: <2= low, 3-5= moderate, >6= high
Reduced personal accomplishment: >39= low, 38-35= moderate, <34= high

Table 5.3 *Summary of One-Way Anova of the burnout and sources of stress scores by level of gender, age, years of experience, thoughts of leaving the profession and school type*

Emotional Exhaustion SF6	Depersonalisation		Lack of Personal Accomplishment		SF1	SF2	SF3	SF4	SF5
F-value	F-value	F-value	F-value	F-value	F-value	F-value	F-value		
Age	4.15*	3.49*	N.S.	N.S.	N.S.	N.S.	N.S.	4,88**	N.S.
Gender	7.53*	N.S.	N.S.	N.S.	7.74**	11.94**	16.43***	N.S.	12.77**
Years of experience	3.41*	N.S.	3.26*	N.S.	N.S.	N.S.	N.S.	8.09***	12.82*
Thoughts of giving up teaching	40.15***	N.S.	3.90*	4.75*	N.S.	N.S.	N.S.	N.S.	4.90*
Thoughts of early retirement	17.00***	N.S.	N.S.	N.S.	N.S.	13.93***	11.91***	N.S.	12.73**
School Level	3.88*	N.S.	11.10***	N.S.	N.S.	4.62*	13.51***	N.S.	N.S.

SF1: in-class problems and recognition by others, SF2: Interaction with students and colleagues, SF3: Teachers' workload, SF4: Students' progress, SF5: Government support, SF6: Continuous demands from teaching

most serious. In terms of burnout, "emotional exhaustion" differed significantly between the two genders F (1,491) =7.53, MSE=106,52, p <.01, η^2=.015, with females reporting higher levels of "emotional exhaustion" compared to their male counterparts.

In terms of school level, secondary school teachers reported significantly higher level of stress compared to their primary school colleagues regarding "teachers' workload", F (1,491) =4,62, MSE=24,76, p <.05, η^2 =.009. A significant effect was also noted as regards "students' progress", F (1,491) =13,51, MSE=16,23, p <.001, η^2 =.027, following the opposite direction (primary school teachers reported higher stress). Similarly, primary school teachers experienced a higher degree of burnout compared to secondary school teachers on two dimensions of burnout, ie. "emotional exhaustion", F (1,491)=3.88, MSE=107,310, p <.05, η^2=.008 and "reduced personal accomplishment", F (1,491)=11.10, MSE=33,287, p <.001, η^2 =.022.

Age was found to have a significant effect on stress stemming from the lack of "government support", F (3, 490)=4,88, MSE=6,97, p<.001, η^2=.029. Older teachers scored higher on this source of stress, and according to the post-hoc tests, significant differences occurred between the three oldest age groups 31-40, 41-50 and over 51 and the youngest group (teachers aged up to 30 years). Age had a significant effect on the two dimensions of burnout i.e. "emotional exhaustion", F (3,490)=4,154, MSE=105,902, p<.01, η^2=.025 and "depersonalisation", F (3,490)=3,951, MSE=24,024, p<.01, η^2=.024. However, contrary to their stress levels, younger teachers reported higher levels of burnout in terms of these dimensions compared to their older colleagues (a significant difference occurred between the youngest -up to 30 years - group and the oldest - over 51 - group).

A similar pattern was repeated for the years of teaching experience. The variable had a significant effect on the "government support", F (2,490)=8,09, MSE=6,94, p<.001, η^2=.032 and the "continuous demands from teaching", F (2,490)=4,32, MSE=12,82, p<.05, η^2=.017. Post-hoc tests showed that teachers with the longest teaching experience (11-20 and 21-35 years) experienced more intense stress in comparison to relatively newcomers (1-10 years). On the contrary, teachers younger in the profession (1-10 years) reported significantly higher levels of "depersonalisation", F (2,490)=3,263, MSE=24,124, p<.05, η^2=.020 and "emotional exhaustion", F (2,490)=3.412, MSE=105,902, p<.05, η^2=.014 compared to teachers with more years of educational experience (21-35 years).

Furthermore, teachers who thought of early retirement in the past two months, experienced higher levels of stress as regards "teachers' workload" F (1,431)=13,93, MSE=29,03, η^2=.031, p<.001, "students' progress" F (1,431)=11,91, MSE=16,11,

η^2=.031, p<.001 and "continuous demands from teaching", F (1,431)=9,04 MSE=12,73, η^2=.027, p<.01. This group of teachers also demonstrated high levels of emotional exhaustion F (1,431)=17,00, MSE=99,49, η^2=.038, p<.001.

To investigate which of the independent variables best predicted the levels of professional burnout, stepwise multiple regression analysis was performed using the biographical data (gender, teaching experience, marital status, intention to leave etc.) as a first block, the sources of stress as a second block of independent variables and the three dimensions of professional burnout as dependent variables.

The results presented in Table 5.4 reveal that from the demographics and the environmental factors used as a first block, the thoughts of giving up teaching co-ntributed significantly to the explained variance of "emotional exhaustion", although the actual percentage was low (8%) and classroom size contributed 11%. According to the results, the less the teacher was thinking of retiring and the smaller the

Table 5.4 *Stepwise regression analyses of demographic factors and job stressors predicting the three dimensions of professional burnout*

Professional burnout	B	SE B	β	R2	Total F	dfs
Emotional Exhaustion						
Step1 Thoughts of giving up teaching	–5.86	1.98	–.24**	.08		
Step 2 Class size	–.35	.15	–.18*	.11		
Step 3 In-class problems and recognition by others	.40	.17	.25*	.25	11.27***	4,118
Step 4 Teachers' workload	.40	.19	.22*	.28		
Depersonalisation						
Step 1 Hours for correction (per week)	.32	.10	.27	.07		
Step 2 Thoughts of giving up teaching	-2.53	1.04	-.21	.11	6,40***	3,118
Step 3 Interaction with students and colleagues	.15	.07	.18	.14		
Reduced personal accomplishment						
Step 1 School size	4.75	.00	.26	.07		
Step 2 Thoughts of early retirement	2.49	1.08	.20	.11	7.46***	2,118

* P<.05, **P<.01, ***P<.001

classroom size, the higher the level of emotional exhaustion. At the second block, the "in-class problems and recognition by others" (parents and superiors) contributed significanty by adding 14% to the explained variance and "teachers' workload" contributed another 3%. The more the teachers felt pressured by these sources the higher the level of emotional exhaustion. All four variables explained a total of 28% of the variance of emotional exhaustion.

Depersonalisation was predicted by three stressors. The "hours spent for correction" significantly contributed to the variance by 7%, "thoughts of giving up" teaching contributed another 4% and "interaction with students and colleagues" contributed 3% reaching 14% in total. It was shown that teachers who spent more time to correct per week and were stressed by the working conditions in the teaching job had higher levels of depersonalisation. In contrast, the teachers who had thoughts of giving up their job presented lower levels of depersonalisation.

Reduced personal accomplishment was predicted by school size (7%) and thoughts of early retirement (4%). Teachers in lager schools who were thinking of early retirement showed a reduced personal accomplishment. The low percentage of variance explained may have occurred because other variables that contribute to this equation were not taken into account in this study. The addition of new variables may significantly increase the percentage of the prediction attributed.

Discussion

The present study investigated the sources of occupational stress and the levels of professional burnout in a sample of Greek primary and secondary school teachers. According to the results, the most frequently reported occupational stressors refer to problems that are difficult to deal with in the classroom such as overcrowded classrooms, students' lack of motivation, poor achievement and students' disciplinary problems. It appears that these types of stressors are in accordance with a large body of evidence showing that in-class stressors rather than organisational stressors constitute the the major stressors affecting teachers and these can lead to feelings of low self-efficacy and feelings that their job is meaningless (Farber, 1991; Forlin, 2001; Lewis, 1999; Male & May, 1998; Morton, Vesco, Williams & Awender, 1997; Pithers & Soden, 1998). It is worth pointing out that these particular sources of stress, endogenous to the teaching profession were similarly reported in earlier studies carried out with samples of Greek teachers working in special education (Antoniou, Polychroni & Walters, 2000).

In terms of professional burnout, Greek teachers manifested moderate levels of

emotional exhaustion and lack of personal accomplishment and moderate to high levels of depersonalisation (despite this categorisation, the range of scores of depersonalisation in the Greek sample was lower, compared with the norms of the original questionnaire suggesting that the Greek teachers of the sample felt less disengaged from their work). Moreover, the levels of professional burnout were lower compared to teachers who worked in special units and/or schools, particularly with regard to the degree of emotional exhaustion (Antoniou, Polychroni and Walters, 2000). Burnout is shown to be strongly related to factors endogenous to the teachers' job, including classroom size and teacher student ratio (Burke, Greenglass & Schwarzer, 1996) rather than teachers' individual personality characteristics.

Furthermore, the results presented also support the notion that gender has an effect on stress and burnout, demonstrating that female teachers experienced higher levels of occupational stress compared to males, as regards the difficulties they confront in the classroom, such as dealing with misbehaviour and low motivation, in conjuction with the large class size, the workload that often spills over to personal and family life and the working conditions, such as the lack of teaching support staff, the competitive relationships between colleagues and the serious lack of means and equipment. These findings are confirmed by the majority of international and Greek studies exploring gender differences (Borrill, Wall, & West, 1996; Georgas & Giakoumaki, 1984; Kantas, 2001; Offerman & Armitage, 1993; Papastylianou, 1997) which indicate that female teachers report higher levels of stress and higher dissatisfaction stemming from, what they perceive, as adverse conditions in the classroom and students' behaviour, as well as work-family interface.

Moreover, females in the present study presented higher levels of emotional exhaustion compared to their male counterparts, which probably suggests that either they have not acquired or cannot utilise the suitable psychological-coping resources geared to the demands of the profession. High levels of emotional exhaustion in females have also been observed in earlier studies (Maslach & Jackson, 1986). A general tendency exists in the literature, according to which females experience higher levels of occupational stress regarding gender-specific stressors and have different ways of interpreting and dealing with problems related to their work environment (Offerman & Armitage, 1993).

These stressors may probably stem from the mentality of the society (e.g. women are expected to successfully combine work and family), the working conditions (e.g. gender discrimination) and the female gender itself (e.g. self-esteem, self-monitoring). Nevertheless, interpreting these differences is a difficult task since there exists a number of intervening factors, such as workload, position in

the job hierarchy and presence of social support (Borrill, Wall & West, 1996; Greenglass, 1991).

Regarding the level of school, teachers of primary education appeared to experience higher levels of stress compared to teachers of secondary education, especially in terms of the problems that they deal with in the classroom (it has to be noted though that results showed that secondary school teachers reported more stress as regards the teachers' workload). The same tendency was also repeated with professional burnout, albeit in a smaller degree, suggesting that teachers who worked with younger children may have developed long-term negative reactions to stress, feeling mental fatigue, energy depletion and disengagement from their work. This contradicts the general assumption that teaching younger students consists a less demanding and generally more rewarding process (Anderson & Iwanicki, 1984; Kantas, 2001).

It can be argued that the increased stress for primary school teachers seems to derive from in-class factors such as dealing with discipline, the large number of students in the classroom and the low of interest of certain students, suggesting that they have to control the consequences of such problems, contrary to the secondary school teachers who may not deal with this problem to the same extent. Future research might investigate the specific in-class or organisational factors that predict the levels of stress of the two different groups of teachers.

Furthermore, the finding that age has an effect on the way teachers experience their job difficulties, supports the hypothesis that younger and relatively new in the profession teachers present higher levels of stress and burnout (Byrne, 1991). As Pines and Aronson (1988) have reported, teachers in the beginning of their career invest all their energy in order to achieve their initial objectives, while they have to simultaneously deal with a number of stressful and intense demands from their environment. If they fail to decrease the gap between their goals and their materialisation, this may have an adverse effect on their job satisfaction and may lead them to decreased involvement and effort regarding their job. This consequence can be interpreted through the young teachers' difficulty to activate the appropriate coping strategies in order to reduce the occupational stress imposed by difficulties occurring in the job (Travers, in press). It can also be maintained that the difficulties presented at the beginning of young teachers' career may be related with their adaptation in the profession and they appear not to have long-lasting repercussions (Cherniss, 1992).

In addition, the results provide perliminary evidence that burnout is predicted by personal teachers' factors (i.e. thoughts of giving up the profession) and job demographics (i.e. school size) and less so by occupational sources of stress (students' discipline). The intention for an early retirement that appeared as a predictor for all

three dimensions of burnout confirmed relevant findings from earlier studies. It has been corelated with high levels of emotional exhaustion, with a decreased feeling of personal accomplishment and a high degree of stress resulting from excessive workload. According to the international literature it is claimed that about 7% or 8% of teachers abandon their jobs, while primary school teachers are more likely to abandon their job than secondary school teachers (Travers, in press).

According to a study held by Travers and Cooper (1993), a high percentage of 66% of British teachers had thoughts about abandoning their job. To a large degree, this tendency can be interpreted on the basis of the occupational stress that teachers experience. Although the degree of Greek teachers abandoning their job has not been studied comprehensively, it seems that Greek teachers do not quit their jobs, mainly due to the permanent type of their positions employed by the state (only teachers from public schools participated in the study).

Summing up the results, the present study reveals that the main sources of stress experienced by Greek teachers are related to discipline problems and interaction with students and colleagues, in agreement with the documented sources of stress in the international literature. Stress and burnout levels varied significantly in terms of gender and age. Female teachers experienced significantly higher levels of occupational stress and burnout and teachers who were younger experienced higher levels of burnout, specifically in terms of emotional exhaustion and disengagement from the profession while older teachers experienced higher levels of stress in terms of the support they feel they receive from the government. While the cross-sectional design of the present study does not allow for causal interpretation in any of these relationships, these findings suggest that there might be a connection between age and gender and the way stress is perceived by different groups of teachers. Future studies can further investigate the specific personal, job demographics and occupational sources of stress and burnout to specific groups of teachers and suggest ways for prevention and intervention.

In order to prevent Greek teachers from feeling occupational stress and professional burnout, it is imperative to work at all levels, namely the individual level, the organisational level and the individual/organisational interface (Cooley & Yovanoff, 1996; De Frank & Stroup, 1989). It is important to: a) investigate individual sources of occupational stress that are related with particular personality characteristics and demographic issues, b) educate teachers of how to effectively use available coping strategies against stress and c) create supporting social networks in order to deal with the consequences of stress.

Through intervention programmes addressed to teaching staff, supporting net-

works in the educational field will be gradually created so that the educational institutions themselves will be able to resolve certain problems related to the demanding nature of teaching job. Future research may incorporate a more extensive pool of specific sources of stress and additional methods of data collection, such as personal interviews with teachers and classroom observations. It is envisaged that the second stage of this research that is currently in process, investigating the coping mechanisms that the teachers employ in order to deal with stress and burnout, will help to this end.

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