Burnout among New Zealand Primary School Teachers

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This study examined factors relating to levels of job burnout in a sample of 386 New Zealand teachers and principals at 47 Auckland North Shore primary schools. The results confirmed the construct validity of the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1993) and showed that these teachers recorded significantly higher scores on the MBI emotional exhaustion subscale than a normative sample of United States teachers. The nature of these differences and implications of the findings for reducing work stress among teachers are discussed.

Over the past three decades, increasing attention in the literature has been given to job-related stress and burnout in occupational settings. Indeed, numerous commentators have noted that job stress features significantly in the lives of many working adults (Maslach & Jackson (1993). Freudenberger (1974) and Maslach (1976) coined the term *burnout* to describe a particular kind of stress response experienced by those working in the helping professions, such as nurses, social workers, police officers and educators. Burnout refers to a state of physical, emotional, and mental exhaustion resulting from involvement with people in emotionally demanding situations. A number of studies on burnout have focused specifically on the teaching profession due to the fact that this profession is one of the largest and most visible professions in society and a recognition of the extreme demands and pressures which teachers often confront (Whitehead & Ryba, 1995).

Recent research has shown that a number of key school culture variables are associated with teacher burnout. These include: (1) increased drive for measurable goal achievement imposed on teachers by school administration; (2) the lack of trust in teachers' professional adequacy; (3) circumscribing school culture; and, (4) disagreeable physical environments to work in (Friedman, 1991). In New Zealand, educational reforms over the past decade have placed increased pressures on schools by requiring them to operate as self-managed organisations working under charter to the Ministry of Education. One effect of this is that school staff often have responsibilities for financial and resource management, as well as for the delivery of the curriculum to a specified standard. Schools are held accountable to the Ministry through a stringent evaluation process administered by the Education Review Office (Taskforce to Review Educational Administration, 1988).

In the context of primary education, another significant contributor to stress and burnout in New Zealand teachers has been the lack of qualified personnel available to teach and the increased workload thus placed on primary teachers. Teacher shortage has been the subject of much media debate concerning the resultant difficulties and personal stress this imposes on the profession. At the time of writing this paper, recruitment efforts have been made to staff primary school positions from overseas, yet many schools have been unable to find enough teachers to fill existing classroom vacancies. Recent studies of teacher stress literature in New Zealand by Manthei and Gilmore (1994) and Whitehead and Ryba (1995) have shown that levels of stress among teachers have increased since the 1980's and that teachers report being under increasingly high stress in their job. Results of these studies indicate that a substantial number of New Zealand teachers may well be experiencing burnout, a more extreme and intense form of stress, which, apart from having severe adverse effects on the teachers themselves, could significantly disadvantage students' growth and learning capacity.

Burnout has been defined by Maslach and Jackson (1981,1986) as a tripartite syndrome comprising emotional exhaustion, depersonalisation, and a reduced sense of personal accomplishment. Emotional exhaustion, a core component of burnout, is characterised by fatigue and weariness that develop as emotional energies are drained. When these feelings become chronic, teachers find they can no longer give of themselves to students as they once could (Schwab,1983). As a result, they begin to experience negative feelings and display negative reactions toward their

students, a state that Maslach describes as depersonalization. Teachers may use a number of ways to display indifferent, negative attitudes towards their students such as using derogatory labels (e.g. "they are all idiots"); exhibiting cold or distant attitudes, physically distancing themselves from students (e.g. barricading themselves behind their desk), and "tuning out" from their students through psychological withdrawal (Schwab,1983). The third component of teacher burnout is a feeling of low personal accomplishment in the job. This may also have a critical impact on teacher behaviours. When teachers feel they are no longer helping students learn and grow, there are few alternative areas on which they can focus to receive rewards.

The MBI three factor structure was determined through an exploratory factor analysis of the 22 items reported in the MBI Manual (Maslach & Jackson, 1986). This factor analysis was based on the combined normative samples (N=1,025) using principal factoring with iteration plus orthogonal rotation. The three-factor solution has been replicated in several follow-up studies with samples of 469 teachers (Iwanicki & Schwab, 1981), 710 teachers and 215 school psychologists (Maslach & Jackson, 1986). More recent research by Kalliath, Gillespie, O'Driscoll & Bluedorn (2000), using structural equation modeling with LISREL indicates that emotional exhaustion is the most robust of the MBI's three factors, followed by depersonalization, while the personal accomplishment factor performed weakly. Kalliath and colleagues tested a new model consisting of a reduced number of items from the emotional exhaustion and depersonalization dimensions. This new measurement model was developed with a sample of 197 nurses, and provided a good fit to the data. Given these contrasting results, it was considered important in the present study to re-examine the factor structure of the MBI

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The application of the MBI for educational research and evaluation of programmes, allows information to be gathered on personal, social and institutional variables that either promote or reduce the occurrence of burnout. Moreover, the MBI lends itself to the systematic study of correlates of burnout. As Maslach (1986) has noted, the relationships between certain demographic variables need to be explored more fully within occupations, in order to provide clues as to what causes burnout and what are its outcomes. With these factors in mind, the present study undertakes to examine specific demographic variables that may be associated with level of burnout. These variables include gender, age, ethnicity, teaching level, position, number of years teaching, number of children, and access to personal and emotional support networks. It is hypothesised that patterns of burnout amongst teachers and ability to cope with the effects of this will vary to some extent across and within these demographic variables.

Research evidence indicates that teachers may experience more work-related stress than many other occupational groups (Kyriacou, 1987). This has been borne out by two major studies in Australia and New Zealand which confirmed that teachers experience higher levels of stress and distress than the general population (Dewe, 1986; Kyriacou, 1987). There is a lack of research information, however, concerning the relative levels of stress and burnout reported by New Zealand teachers compared with those reported in overseas studies.

The present research was designed to explore substantive issues relating to levels of burnout among New Zealand primary school teachers. The aims of the study were threefold: (1) to confirm the factor structure of the most commonly used measure of burnout, the *Maslach Burnout Inventory* (MBI), in this sample; (2) to examine differences in burnout associated with variations in demographic and occupational variables; and, (3) to compare levels of burnout experienced by New Zealand primary teachers with those reported by a normative sample of primary teachers in the United States, where the MBI was developed and validated. Exploration of these issues is essential for: (a) establishing the utility of the MBI as a measure of burnout in New Zealand; and, (b) determining the extent to which New Zealand primary teachers do, in fact, experience burnout and the factors associated with burnout in this occupational group.

Method

Sample

Participants in this study were 386 teachers and principals from 47 schools zoned on the North Shore of Auckland. The study was part of a larger investigation of occupational stressors in primary schools. Demographic characteristics of the sample are shown in Table 1. This shows that the majority of the sample were female and of European origin. A high percentage of the participants (29.5%) had over 20 years experience teaching and most (63%) were between 30 and 49 years of age. Well over half of the sample were employed in Scale A (basic) teaching positions (61%) and were full time (81%). This table also provides a comparison of the number of teachers at each level of teaching, qualifications of the participants, the number of children or dependents in their care, and the number of emotional support networks they reported as being available to them.

Measures

The first section of the questionnaire consisted of demographic and occupational background questions, as depicted in Table 1. The second section of the questionnaire contained the *Maslach Burnout Inventory* (Form Ed, Second Edition), which consists of 22 items assessing three components of the burnout syndrome (Maslach and Jackson, 1993): (1) emotional exhaustion (feelings of being overextended and exhausted by one's work) – 9 items; (2) depersonalization (negative, cynical attitudes toward the recipients of one's services, in this case students) – 5 items; and (3) Lack of personal accomplishment (negative evaluation of one's performance and achievement in the job) – 8 items. Teachers responded to each item on a frequency continuum ranging from 0-6, with higher scores indicating greater frequency of occurrence of the particular experience. Item scores for each subscale were summed to

Table 1. Demographic Characteristics of Participants (N= 387)

Variable	Categories	Number	Percent
Gender	Male	50	12.9
	Female	336	86.8
Age	20-29 Years	56	14.5
	30-39 Years	107	27.6
	40-49 Years	134	34.6
	50-59 Years	81	20.9
	60+ Years	7	1.8
Ethnicity	European	373	96.4
	Maori/Polynesian	13	4.0
	Other	-	-
No. of Years Teaching in All Schools	0-4 Years	61	15.8
	5-14 Years	164	42.5
	15-20+	161	41.7
Position	Administration	83	21.5
	Teachers	244	63.2
	Ancillary (Relieving/aide)	25	6.4
Teaching Level	Year 1-3	176	45.6
	Year 4-6	162	42.0
	ReadingRecovery/ Special Needs	16	4.1
No. of Children/ Dependents in Teacher's Care	None	180	46.6
	One	49	12.7
	Two or more	157	40.8
Emotional Support Networks	Few	55	14.5
	Many	329	85.5

Note: Sample sizes vary due to missing data

generate scale scores for the three components. Reliability and validity data for the second edition of the MBI Form Ed have been reported in Maslach and Jackson (1993). Iwanicki and Schwab (1981) obtained Cronbach alpha coefficients of .90 for emotional exhaustion (EE), .76 for depersonalisation (DP) and .76 for (lack of) personal accomplishment (PA), while Gold (1985) reported very similar estimates of .88 (EE), .74 (DP) and .72 (PA).

Procedure

All primary school principals in the North Shore and Hibiscus Coast zoning of Auckland, New Zealand were phoned and given information about the study and permission was requested for the researcher (the first author) to recruit volunteers for the survey. Principals whose permission was obtained (N=53) were sent multiple copies of the survey to distribute to teachers in their school. Participants were advised in a cover letter that the survey was designed to gather information about teachers' perceptions of working conditions and personal adjustment. Postage-paid return envelopes were provided to ensure confidentiality and, to maintain anonymity, teachers were not asked to identify themselves on the survey form. Completed surveys were received from 47 of the 53 schools who had agreed to participate. The procedure for conducting this study was formally approved by the Massey University Human Ethics Committee.

Results

Factor Structure of the MBI:

The responses of the New Zealand primary school teachers (N=386) were factor analyzed in order to verify the factor structure of the MBI. To test the structure, an oblique three factor solution was derived using the maximum likelihood methods. The oblique solution was chosen with recognition that there were significant intercorrelations between the factors (see Table 2). The factor intercorrelations for the New Zealand samples are consistent with the intercorrelations between MBI Subscales reported in the Manual.

The 3-factor oblique solution, using the maximum likelihood method, accounted for 51.3 percent of the variance. A chi-square Test of Fit for the 3-factor model was highly significant (Chi-square = 460.42, $p<.001$). For verification of the factor structure, the NZ factor solution was aligned with the US factor structure reported for the MBI normative data (Maslach & Jackson, 1993). This comparison of item factor loadings for the MBI is displayed in Table 3. For the purpose of this analysis, factor loadings equal to or greater than .40 were taken as significant and are displayed in bold. As can be seen, the NZ factor structure confirms the presence of three principle components reflecting the tri-dimensional nature of the MBI. There is, however an overlap between

Table 2. Factor Correlation Matrix for the Maslach Burnout Inventory

	Factor 1 Emotional Exhaustion	Factor 2 Personal Accomplishment	Factor 3 Depersonalization
Factor 1: Emotional Exhaustion	1.00		
Factor 2: Personal Accomplishment	-.18	1.00	
Factor 3: Depersonalization	.48	-.37	1.00

depersonalization and emotional exhaustion, reflecting the intercorrelation between these two factors. This overlap has been reported in other investigations of the MBI factor structure (Kalliath, Gillespie, O'Driscoll & Bluehorn, 2000). It should also be noted that the original factor analysis reported in the MBI Manual (Maslach & Jackson, 1986) made use of principle factoring with an orthogonal rotation. This procedure would minimise the overlap despite the between factor correlations.

Factor 1 consisted of the emotional exhaustion items for both the US and New Zealand factor structures, accounting for 31.4% of the variance (NZ solution). This confirms that the EE sub-scale is by far the dominant dimension of the MBI. The nine items in the emotional exhaustion subscale described feelings of being emotionally overextended and exhausted by one's work. For this factor, the item with the highest factor loading " I feel used up at the end of the day" (.85) reflects a high degree of burnout. All items of the emotional exhaustion subscale loaded on this factor.

Factor 2 showed consistent loadings for depersonalisation items on both the US and NZ structures. The

Table 3. Item Factor Loadings for the Maslach Burnout Inventory Comparison of NZ and US Factor Structures Oblique Maximum Likelihood Solution

Item	Factor 1 Emotional Exhaustion		Factor 2 Depersonalisation		Factor 3 Personal Accomp.	
	USA	NZ	USA	NZ	USA	NZ
1. I feel emotionally drained from my work.	**.74**	**.84**	.06	**.40**	.02	-.16
2. I feel used up at the end of the work day.	**.73**	**.85**	.04	.31	.03	-.09
3. I feel fatigued when I get up in the morning & have to face another day on the job.	**.66**	**.77**	.18	**.41**	.15	-.21
6. Working with people all day is really a strain for me.	**.61**	**.56**	.22	**.56**	-.10	-.22
8. I feel burned out from my work.	**.84**	**.81**	.19	**.52**	-.09	-.25
13. I feel frustrated by my job.	**.65**	**.65**	.23	**.45**	-.12	-.17
14. I feel I'm working too hard on my job.	**.56**	**.51**	.08	.31	.07	-.05
16. Working with people directly outs too much stress on me.	**.54**	**.47**	.31	**.55**	-.06	-.24
20. I feel like I'm' at the end of my rope	**.65**	**.69**	.21	**.55**	-.08	-.29
II. Depersonalization						
5. I feel I treat some students as if they were impersonal objects.	.11	.33	**.67**	**.63**	-.09	-.27
10. I've become more callous toward people since I took this job.	.23	.38	**.66**	**.76**	-.13	-.23
11. I worry this job is hardening me emotionally.	.37	**.41**	**.55**	**.77**	-.10	-.30
15. I don't care what happens to some students.	.12	.26	**.62**	**.54**	-.16	-.23
22. I feel students blame me for some of their problems.	.13	.28	**.41**	**.54**	-.04	-.22
III. Personal Accomplishment						
4. I can easily understand how my students feel about things.	.11	.00	-.06	-.27	**.50**	**.42**
7. I deal very effectively with the problems of my students.	-.01	-.07	-.07	-.25	**.54**	**.63**
9. I feel I'm positively influencing other people's lives through my work.	-.02	-.03	-.17	-.20	**.58**	**.62**
12. I feel very energetic.	-.30	-.44	-.04	-.28	**.43**	**.55**
17. I can easily create a relaxed atmosphere with my students.	-.06	-.18	-.08	-.30	**.51**	**.58**
18. I feel exhilarated after working closely with my students.	.00	-.21	-.23	-.23	**.55**	**.60**
19. I have accomplished many worthwhile things in this job.	-.10	-.19	-.17	-.33	**.57**	**.64**
21. In my work, I deal with emotional problems very calmly.	-.07	-.03	.07	-.33	**.59**	**.40**
Eigen Values		6.90		2.71		1.67
Percentage of Variance		31.36		12.31		7.59
Cumulative Percentage of Variance		31.36		43.67		51.26

five items in the depersonalization scale described an unfeeling and impersonal response towards students in the teacher's care or service. For this factor, the two items with the highest loadings, "I worry that this job is hardening me emotionally (.77), and I've become more callous toward people since I took this job" (.76) reflect emotional isolation and negative attitudes toward others. All 5 items of the depersonalisation subscale loaded on this factor.

Factor 3 is defined by the personal accomplishment items of the MBI, found to be consistent for both the US and NZ data. The item with the highest loading on this factor, "I have accomplished many worthwhile things in this job" (.64), is clearly concerned with a sense of achievement in working with others. All of the eight items comprising the subscale of personal accomplishment loaded on Factor 3. These described feelings of competence and successful achievement in the teacher's work with others.

Given the moderate intercorrelation between EE and DP, it is not possible to accept that there is a clear-cut distinction between these two dimensions. Clearly, both of these scales refer to negative emotional energy or intolerance for others. In contrast the personal accomplishment scale denotes items in the positive direction of feelings and relationships with others.

Within Sample Comparisons of EE, DP, and PA Scores

The category means for each independent variable were compared to determine if there were significant differences in terms of the three factors of the MBI. This was followed by a Scheffe Post Hoc Comparison to identify which group or groups were significantly different from one another (Scheffe, 1953). The bold type denotes means that were found to be significantly different at the .05 level using the Scheffe Comparison. A check was also carried out to determine if there were any differences in MBI ratings due to school decile level (1-10). ANOVA results confirmed that there were no significant differences between the school decile groups for the three MBI factors.

Comparisons of emotional exhaustion (EE) indicate significant mean differences for age group, position, teaching level, and ratings of emotional support (Table 4). The picture that emerges is that staff in the 30-39 age group have significantly higher EE scores compared with older staff (Scheffe Comparison, $p<.05$). Likewise, there was a significant difference between the mean EE scores for 'number of years teaching experience'. Although no two groups were significantly different from one another, staff with relatively fewer years of experience (14 years or less) tended to record higher EE scores than their longer serving peers. Teaching staff recorded significantly higher levels of EE in comparison to administrators and ancillary staff (relieving teachers and teacher aides). Year 4-6 teachers recorded the highest EE mean score (Scheffe Comparison, $p<.05$) followed by year 1-3 teachers and special education teachers respectively. Staff reporting the presence of "many" support networks reported lower EE scores than colleagues reporting "few" support networks.

For the personal accomplishment (PA) scale, significant mean differences were found for position,

Table 4. Analysis of Emotional Exhaustion, Personal Accomplishment, and Depersonalization Subscale Scores

Variable	Categories	EE Mean	EE S.D.	EE *F*	PA Mean	PA S.D.	PA *F*	DP Mean	DP S.D.	DP *F*
Gender	Male	27.89	9.29	.18	36.23	7.21	.62	8.22	5.76	6.66**
	Female	27.22	10.69		37.26	5.85		6.02	5.60	
Age	20-29	28.50	9.60	3.26**	37.98	6.69	.78	7.14	6.23	2.41
	30-39	**28.85**	10.63		36.80	5.46		6.73	5.94	
	0-49	27.51	10.45		37.35	5.41		6.51	5.58	
	50+	24.43	10.51		36.54	7.22		4.91	4.90	
Ethnicity	European	27.20	10.51	.67	37.14	6.05	.79	6.19	5.62	-2.20**
	Maori/Polynesian	29.31	11.06		36.69	5.91		9.69	6.12	
	Other									
No. of Years Teaching	0-4	**27.66**	10.22	4.40**	37.51	5.98	3.46*	6.53	**6.15**	4.39**
	5-14	22.82	10.41		35.16	4.89		3.79	5.93	
	15-20+	**29.34**	12.32		35.71	7.28		7.09	5.18	
Position	Administration	25.50	8.84	6.50**	38.41	5.69	4.29**	6.05	4.62	3.34*
	Teachers	**28.34**	10.86		36.57	6.13		**6.63**	5.98	
	Ancillary	21.40	9.10		39.08	5.18		3.64	4.48	
Teaching Level	Year 1-3	26.96	11.29	3.86*	**38.04**	5.86	4.47**	5.48	5.38	6.06**
	Year -6	**28.68**	9.94		36.133	6.07		**7.42**	6.07	
	Reading Recovery	22.36	7.89		6.09	6.21		4.50	4.10	
	Special Needs									
No. of Children/ Dependents	None	26.26	10.45	1.53	37.24	6.01	.28	6.18	5.50	2.56
	One	29.29	10.12		36.50	6.88		8.00	6.99	
	Two or more	27.68	10.68		37.19	5.83		5.92	5.34	
Emotional Support Networks	Few	31.12	10.18	8.41**	35.49	6.70	4.77*	8.71	6.52	12.21**
	Many	26.67	10.45		37.41	5.88		5.89	5.41	

Note: * $p<.05$, ** $p<.01$
Bold type denotes group means that are significantly different from others using Scheffe Post Hoc Comparison

Table 5. Comparison of NZ and US Normative Data

Variable	Mean	SD	t	Alpha Coefficients
EE (NZ)	27.31	10.52	10.73 ***	.90
EE (US)	21.25	11.01		.90[a]
DP (NZ)	6.31	5.66	15.08 ***	.79
DP (US)	11.00	6.19		.76[a]
PA (NZ)	37.12	6.04	11.33 ***	.77
PA (US)	33.54	6.89		.76[a]

Note: [a] Alpha coefficients reported by Iwanicki & Schwab (1981)
*** p<.001

teaching level and emotional support networks (all p<.01). This shows that teachers, in comparison to administrative and ancillary staff, tended to record the lowest mean PA scores. Apparently, there is inverse relationship between EE and PA such that teachers recording higher levels of emotional exhaustion, also rate themselves as having a lower level of personal accomplishment. The mean for PA was highest amongst year 1-3 teachers compared with reading recovery, special education and year 4-6 teachers compared with year 1-3 teachers (Scheffe Comparison, p<.05). The PA mean was significantly higher for individuals who rated themselves as having few personal support networks compared with those who indicated that they had many sources of support.

The depersonalization (DP) scale scores reflect a similar pattern to the PA comparisons. This shows that teachers recorded higher DP scores on average than administrators or ancillary staff (Scheffe Comparison, p<.05). Also, there was a significant difference between the means for teaching level, although the post hoc comparison showed there were no differences between any two groups. Special needs staff and year1-3 teachers recorded lower DP scores relative year 4-6 teachers. The mean DP score for staff who rated themselves as having few emotional support networks was significantly higher than for those recording many support networks. A significant gender difference was found for DP indicating that males on average record much higher levels of depersonalization than their female counterparts. Maori/Polynesian and other teachers recorded significant higher DP scores than their European counterparts. It may be however that the small sample size (N=13) is unrepresentative and so caution needs to be exercised in interpreting this result.

In summary, these analyses show that teachers in the upper primary school level (year 4-6), and staff in the 30-39 year-old age range record the highest level of Emotional exhaustion (EE). The mean for personal accomplishment (PA) is highest amongst year 1-3 teachers compared with year 4-6 and special education staff. Male respondents and teachers in the 4-6 year range recorded the highest levels of depersonalization (DP) compared with their peers.

Between Sample Comparisons of US and NZ teachers

Table 5 shows the means, standard deviations, t values and probability, and alpha reliability coefficients for each of the three subscales of the *Maslach Burnout Inventory*. This compares Auckland New Zealand primary teachers (N=384) with the normative data for US teachers reported in the MBI Manual (N= 4163, Maslach & Jackson, 1993) . As can be seen, the alpha reliability coefficients for the New Zealand data are nearly identical to those reported for the US normative data (EE=.90, PA=.79, DP=.77). New Zealand teachers recorded a significantly higher mean score on the emotional exhaustion scale (27.35) compared with their United States counterparts (21.25). In contrast, the depersonalization mean score for New Zealand teachers is significantly lower than for the US sample. Likewise, New Zealand teachers recorded a higher mean score on the personal accomplishment scale compared with the US sample. It is interesting to observe that, despite overall high levels of emotional exhaustion compared with the US teachers, New Zealand teachers report higher personal accomplishment scores concerning their professional work. Care needs to be exercised however in making direct comparisons as no information is presented in the MBI manual on the characteristics of the American sample.

Discussion

The present study extends the findings of previous research by examining stress and burnout in relation to demographic and personal characteristics, and verifying the factor structure of the MBI based on a comparison of New Zealand teachers and United States teachers and other occupational groups. The results indicate that New Zealand teachers recorded significantly higher levels of emotional exhaustion in the work place compared with their US counterparts. It needs to be recognised however that the US normative data were collected in the 1980's and hence differences between New Zealand and United States teachers may reflected the different points in time at which these two sets of data were gathered. In order to verify these differences, it would be necessary to carry out another between country comparison using a more contemporary US sample that has equivalent characteristics to the New Zealand sample.

Several reasons may be proposed for the high levels of emotional exhaustion reported by New Zealand teachers. High workload has been identified as the main contributor to stress and burnout amongst New Zealand Teachers (Whitehead & Ryba, 1995; Dewe, 1986; Manthei & Solman, 1988). Also at the time this study was being carried out, there was a general shortage of teachers in New Zealand schools and this may have increased pressure on existing staff. The high ratings of emotional exhaustion of New Zealand teachers may also be due, in part, to the excessive curriculum demands placed on New Zealand teachers who are required to teach many specialist subjects such as music, Maori language, sport/fitness and art, in addition to the core learning areas.

Recent educational reforms that began with the Picot

Report (Taskforce to Review Education Administration, 1988), have placed increased pressure on schools to take governance responsibilities for all aspects of education under contract to the Ministry of Education. The learning institution is the basic 'building block' of educational administration, responsible for determining how its educational resources are used, within overall guidelines set by the Ministry. No intermediate bodies exist between the Ministry of Education and the individual learning institution. Pressure is exerted on all fronts by the requirements for schools to set their own objectives in recognition of community needs, and to be accountable through regular 'assurance audits' carried out by the Education Review Office. These audits are intended to verify that the school is conforming with statutory requirements, and reaching the expected level of student achievement through overall evaluation of academic performance data.

Another factor that may contribute to stress and burnout amongst teachers, is the fast-tracking of subject area reforms that have taken place since the adoption of the New Zealand Curriculum Framework (Ministry of Education, 1993. This has been informally cited by teachers participating in this research project as a very stressful process that requires them to work overtime in order to keep up with assessment and documentation demands. As well as extracurricular activities such as weekend sports, choir and drama events, teachers in New Zealand are also expected to take on a pastoral role supporting students' personal needs. Most New Zealand primary schools do not have counsellors in the school and thus their role extends to include psychological helper and provider of specialised programmes for children with special needs. This dual role as teacher and support person may contribute to teachers' feelings of emotional exhaustion and alienation or distancing from their students. This is especially evident with male teachers who recorded a significantly higher mean score on the depersonalisation subscale compared with female teachers. This gender difference is consistent with previous research by Maslach & Jackson (1985).

Comparison of mean ratings for emotional exhaustion reveals that the 30-39 age group of teachers recorded higher EE scores than the older age groups. An explanation for this may be that, in addition to learning and consolidating skills necessary for their position, this mid career group are at the career achieving stage, working toward promotions and trying to move up the pay scale. Inevitably, the need to perform and achieve tangible results, can increase stress loadings on teachers. On the other hand, older teachers who have remained in the system, are likely to have adapted to the requirements and learned the necessary coping mechanisms in order to function effectively. This is evident also in the lower mean scores for depersonalisation (DP) recorded by older respondents.

Other groups that revealed higher EE means were Maori/Polynesian teachers and other teaching staff who are not working in administration or ancillary positions. It is well known among the New Zealand teaching profession, that Maori teachers are under considerable pressure, not just because there are so few of them, but because of the increasing need to accommodate new curriculum demands. These teachers, as well as providing leadership in all areas of Maori culture, are expected to cater to all things Maori, i.e. resources, culture, music, art, sport, as well as supporting the needs of non Maori teachers who require assistance with their own programmes. These requirements are very likely to cause extreme exhaustion and job dissatisfaction and lead to high staff turnover.

Teachers in general had significantly higher EE scores than administration and ancillary staff. This may simply reflect the fact that they are the ones spending the most time in face to face contact with students dealing with education and behaviour problems, and meeting the individual needs of all students with a wide range of abilities and temperaments. There is a need however for future research to explore the associations between burnout and certain demographic and individual characteristics. There is evidence from previous research to show that burnout is linked to personal expectations (Stevens & O'Neill, 1983) and motivations (Anderson & Iwanicki, 1984). It may be that New Zealand teachers, who record relatively higher personal accomplishment scores, also hold high personal expectations for themselves and that this tendency contributes to occupational stress.

In contrast to the US normative data, New Zealand primary school teachers reported higher scores on the personal accomplishment scale (PA), reflecting the tendency to evaluate themselves positively in their work, accomplishing many worthwhile things and dealing well with students problems. Reasons for this result are unclear. It may be that with recent hard line measures of accountability and goal achievement imposed on teachers, they may be unwilling to admit problems with their own personal accomplishment. In other words, it may be acceptable to express feelings of stress and exhaustion, but not acceptable to indicate failure to achieve a good standard, or accomplish tasks as this may jeopardise their job situation. Teachers may obviously want to be seen by others as achieving or succeeding with their teaching. An alternative explanation for this result is that despite rating themselves as having a high level of emotional exhaustion, New Zealand teachers persevere with meeting employment demands and continue to derive satisfaction from their personal accomplishments with students. It is speculated that teachers reporting relatively high levels of stress and burnout, may employ coping strategies or have personality attributes that mediate their feelings of accomplishment.

Whatever the reason, it is clear that the profile of New Zealand teachers is significantly different than that of their US counterparts on these factors. The relationship between relatively high emotional exhaustion and high personal accomplishment needs to be further investigated.

The mean depersonalization score for New Zealand teachers was significantly lower than for their US counterparts, reflecting a low degree of burnout. This finding is at odds with the very high EE scores of the New Zealand teachers, but as suggested by Maslach and Jackson (1993), there is limited knowledge about the relationships between the three aspects of burnout and the scores for each subscale

should be considered separately and not combined. While many reasons may be advanced for the inverse relationship between EE and DP, it may be the case that even when teachers are very emotionally exhausted, they do not necessarily respond to their students in a negative or cynical manner or treat them as impersonal objects. As with personal accomplishment (PA) it may be that that teachers do not (even to themselves), want to be seen as callous and inhuman to others and are thus wary of admitting this even in an anonymous situation. In New Zealand, considerable emphasis is placed on the responsibility of teachers for facilitating a caring and supportive relationship with their students. It may be that differences in the perceptions of the teachers concerning their pastoral role, may account for the contrast between the US and NZ sample.

In New Zealand, strong emphasis is placed on social responsibility and obligations of schools to the community. The notion of 'in loco parentis' is readily catered for in New Zealand primary schools and teachers are expected to take on many different roles as educator, socialiser, counsellor, pastor and even mother. This may stand in contrast to the situation overseas where the role of teachers is viewed more as an 'occupation', with fewer social obligations and limited support requirements outside of the customary academic role. Thus, New Zealand's social and bicultural values may to some extent have influenced the low depersonalisation scores whereby teachers have it ingrained in their own expectations to possess caring, humane attitudes to their students, regardless of workload.

Recommendations for Future Research

The present study has confirmed that there are relatively high levels of stress and burnout amongst New Zealand teachers that warrant further investigation. The study of specific demographic, environmental and personality factors that contribute to stress and burnout would help to elucidate the most significant variables associated with effective adjustment and ability to cope in the work environment. It is recommended that future research focus on the following specific aspects:

1. Analysis of teachers who record high levels of emotional exhaustion to determine individual and personality factors that may be associated with burnout. This may include personal expectations, job dissatisfaction, motivation, perceptions of ability, and coping strategies.
2. Investigation of low and high stress work environments to determine the features of these environments that contribute to the overall well being and effective coping of teachers. This may include such factors as workload, communication networks, role conflict, opportunities for recognition, and availability of peer support.
3. Analysis of attention given to occupational stress and coping strategies within pre-service education and inservice professional development.
4. Longitudinal research is needed to determine the causal relationship between burnout and various personal and social factors. At a personal level, this could focus on the association between coping strategies, personality traits, and job performance. At an organisational level, attention needs to be given to the effects of stress on job performance, absenteeism and health. An understanding of these factors will assist in determining the measures that can be taken to alleviate emotional exhaustion and burnout.

Implications For Alleviating Teacher Burnout

Burnout research has as its ultimate objective, the amelioration of the negative effects of stress, which is in this case is identified as "emotional exhaustion". The findings of this study further confirm that stress and burnout are an occupational hazard of the teaching profession and that steps need to be taken to alleviate the situation for all concerned. These steps should include:

1. identifying specific stressors within the work environment that contribute to this effect;
2. strategies for increasing teachers abilities to deal effectively with the demands of educational reforms;
3. provision of greater personal guidance and support for teachers;
4. provision of informative and helpful feedback about teachers quality of work and achievements;
5. implementation of professional support networks to overcome a sense of feeling isolated in the classroom; and,
6. promotion of ongoing programmes concerned with stress management, coping strategies, and development of a balanced approach to living.

The development of these forms of support is a major challenge, but alleviation of stress and burnout is critically important for ensuring maximum job performance, health and well being amongst New Zealand teachers.

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