The Wellbeing of New Zealand Teachers: The Relationship between Health, Stress, Job Demands, and Teacher Efficacy

A thesis presented for the partial fulfilment for the requirements of

Master of Educational Psychology

Massey University, Albany

New Zealand

Jay Beckley

2011

Abstract

Teacher stress is a phenomenon that has attracted a vast amount of attention over the last forty years. Historically, national and international research has demonstrated role overload and teacher efficacy have long been associated with teacher stress. More recent international research indicates increased role responsibility might also be a contributing factor. The last published New Zealand study on teacher stress was in 1996, which prompted further investigation of the factors associated with stress and extended previous research by examining the physical and mental health status of New Zealand teachers. The present study examined the relationship between physical health, mental health, stress, role overload, role responsibility, and teacher efficacy. It also examined the factors that influence stress and mental health levels. Finally, the present study investigated the prevalence of stress to determine if it has changed since the last published study. Participants were 131 teachers randomly recruited across New Zealand high schools who completed a battery of online self-report questionnaires that measured health, stress, role overload, role responsibility and teacher efficacy. Analysis revealed the physical and mental health of teachers was no worse than that of the general population. The results of a path analysis demonstrated role responsibility and role overload directly influenced stress and mental health levels negatively. Physical health had a direct and positive influence over stress and mental health levels and teacher efficacy was found to have no influence over stress and mental health levels. Over 39% of teachers considered teaching to be either very stressful or extremely stressful. This is an increase of 13.6% from the last published study. The findings and limitations are discussed along with the implications for teachers and policy makers.

Dedication

This Master's thesis is dedicated to Hayden Beckley. Sometimes what we strive for will seem impossible. Sometimes what we strive for will need to be adjusted or delayed or may not even be achieved. However, striving for goals that may seem out of reach will still lead to great achievements. This Master's thesis represents achieving something great despite not having achieved the original goal and the adjusted goal is yet to be achieved. I hope this encourages you to strive for great things and not to get discouraged when adjustments need to be made.

Acknowledgments

There are a number of people I wish to acknowledge who have in one way or another supported me in completing my Master's thesis. I begin with Dr Jane Prochnow and Professor Bill Tunmer. I feel privileged to have had you both as my academic supervisors. Your guidance and expertise was vital and sincerely appreciated. I also appreciate the support from Dr Bee Lim who provided me with a crash course in structural equation modeling and provided invaluable statistical advice and guidance. I would like to thank my family who supported and encouraged me during the last six years, particularly my mum and dad who welcomed me back home at the beginning of year one. Thank you to my work colleagues in mental health whom I bounced ideas off. I would especially like to acknowledge all the teachers who participated in this research. Ironically, it's taking time to attend to external demands that contributes to stress. Thank you for taking the time to participate; I do hope my research will make a difference to your practice. Finally, to my partner Sharon whose unconditional love, support, and tolerance have been pivotal for the completion of my Master's degree. You sacrificed as much as what I did, for which I'll be forever in your debt. I'm truly grateful for everyone's support and contribution.

Table of Contents

List of Illustrations

Tables

Figures

Introduction

Since the introduction of education reform under Tomorrow's Schools in 1989 (The New Zealand Education Act, 1989), teacher stress has become an important topic. The running of schools changed significantly from being central government-run to being run like a business with a board of trustees, the school principal as the CEO, and heads of departments becoming middle managers. As a result, schools became self-managing, responsible, and accountable for financial and educational performance. Thus, teachers predicted that their roles would change drastically due to increased responsibility, workloads, and working hours (Sullivan, 1993) leading to increased stress (Manthei, Gilmore, Tuck, & Adair, 1996).

A number of studies have been carried out post Tomorrow's Schools to determine the impact on teachers' stress levels. Wylie (1989, 1991, 1992) carried out three surveys and revealed several indicators of increased stress levels. Wylie found that both principals and teachers were working longer and openly expressed their concerns about their stress levels. Wylie also found that Tomorrow's Schools was having a negative impact on principals' and teachers' jobs and contributed to low job satisfaction. Wylie's findings were consistent with the findings of other New Zealand studies, including Keown, McGee, and Oliver (1992); McConnell and Jeffries (1991); McGee, Keown, and Oliver (1993), all of which found high levels of teacher stress due to work overload and reduced job satisfaction. Bridges (1992) also examined the impact of Tomorrow's Schools and extended the previous findings that increased stress contributes to detrimental effects of the physical and mental wellbeing of teachers.

Another factor that may contribute to teacher stress is the fast-tracking of subject area reforms because of the adoption of the New Zealand Curriculum Framework (Ministry of Education, 1993; Whitehead, Ryba, & O'Driscoll, 2000). According to Whitehead et al. (2000) education reform has been informally cited by teachers as a very stressful process that

has required teachers to work longer hours to keep up with assessment and documentation demands. Whitehead et al. also point out that these extra demands are on top of extracurricular activities such as sports coaching.

In 2010 the government made further changes to the New Zealand Curriculum by introducing National Standards. It is well documented that in countries that have introduced National Standards the nature of teachers' work has changed (Day, Elliot, & Kington, 2005). Day et al. (2005) point out that the teacher's role has enlarged and intensified, become performance orientated, and become directly accountable to stakeholders. Thus, according to Smyth (2001), National Standards have resulted in a managerial role for teachers. Furthermore, according to Antone (1994) National Standards have become problematic for teachers because of increased responsibility for the outcomes of students, some of whom have no interest or desire to engage in the curriculum. According to Klette (2000), changes in teachers' roles resulting from National Standards are associated with increased stress, fatigue, and burnout.

Although strong evidence suggests chronic stress leads to mental and physical illnesses (Schneiderman, Ironson, & Siegel, 2005), the current status of physical, mental, and stress levels of teachers is uncertain and they have never been investigated together. Research on teacher stress indicates work overload or job demands characterised by extra duties outside of the classroom and disruptive behaviour that contributes to reduced teacher efficacy are the two leading predictors of teacher stress (Boyle, Borg, Falzon, & Baglioni, 1995). Furthermore, international research suggests that with the introduction of National Standards the teacher's role has expanded and responsibilities have increased, which has also become a contributory factor to stress.

The last published study on stress of New Zealand teachers was in 1996 (Manthei et al., 1996). Past New Zealand studies that have examined teacher stress post education

reforms have overlooked the relationship between physical health, mental health, teacher

stress, job demands, and teacher efficacy. This relationship is the focus of the present study.

Wellbeing

"Wellbeing" has various subjective meanings and is a construct that has evolved over

the years. Furthermore, the definition of wellbeing differs over cultures and disciplines that

study the concept (Campion & Nurse, 2007; De Chavez, Backett-Milburn, Parry, & Platt,

2005). In psychology wellbeing was first studied in 1969 by Norman Bradburn, who defined

wellbeing as the balance between positive and negative affect (Bradburn, 1969). Bradburn's

seminal work lead to conceptual and methodological refinements, as his work overlooked the

intensity and frequency of affect (Diener, Larsen, Levine, & Emmons, 1985). Other

dimensions of wellbeing have been added and multidimensional models have been

constructed. For example Warr's (1987) model of wellbeing consists of four dimensions:

affective wellbeing, aspiration, autonomy, and competence. Ryff's (1989) model of wellbeing

consists of six dimensions: autonomy, self-acceptance, positive relations, personal growth,

environmental mastery, and purpose in life. As pointed out by Campion and Nurse (2007), an

inconsistent meaning of wellbeing presents challenges to both researchers and clinicians.

More recently integrated models of wellbeing have been created. Specifically,

Campion and Nurse's (2007) model of wellbeing suggests that wellbeing is determined by

interactions between mental, physical, and social health. For example, a number of studies

have demonstrated an increased risk of depression when suffering from a chronic physical

condition (Chapman, Perry, & Strine, 2005; Moussavi et al. 2007). Furthermore, a history of

affective disorders has been shown to be a strong predictor of heart disease, diabetes, and

respiratory disease due to engaging in behaviours detrimental to health (Phelan, 2001).

Campion and Nurse's (2007) integrated model is consistent with the definition set by

the World Health Organisation (WHO). Since its inception in 1948, WHO defined health as

"a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 1948). Although literature is reviewed that evaluates wellbeing from a multidimensional perspective, the current study employs Campion and Nurse (2007) and WHO views of wellbeing, suggesting that wellbeing is simply the level of an individual's mental and physical health and how they interact with each other.

While physical health is easily understood and defined, mental health encompasses three different dimensions: psychiatric disorders, psychological distress, and burnout. According to Kovess-Masféty, Rios-Seidel, and Sevilla-Dedieu (2007), psychiatric or mental disorders refer to exact diagnoses of mental illnesses as defined by diagnostic tools such as the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) or The International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10). Psychological distress refers to symptoms of poor mental health but does not necessarily warrant a formal diagnosis of a mental disorder. Finally, burnout is often conceptualised within the framework of stress research. However, there are significant differences. According to Kyriacou and Sutcliffe (1978) stress or psychological distress is characterised by unpleasant emotions resulting from aspects of his/her work. Burnout is defined as a syndrome of psychological problems experienced as a result of prolonged work stress, and is characterised by emotional exhaustion, depersonalisation, and reduced personal accomplishment (Kovess-Masféty et al., 2007; Milfont, Denny, Ameratunga, Robinson, & Merry, 2008).

In the current study literature is reviewed across all psychological dimensions; however, psychological distress is the dimension investigated as identifying formal mental health diagnoses is outside the scope of this study.

Stress

Selye's (1936, 1956) pioneering work on stress was the beginning of what has become one of the most researched subjects in social science. Selye (1976) defines stress as "the nonspecific response of the body to any demand" (p. 51). In physiological terms, stress is an emergency reaction of the adreno-cortical system and sympathetic nervous system that is otherwise known as a fight or flight response (Selye, 1936). According to Selye (1936, 1956), physical illness develops from a physiological reaction to a stressor through a three-stage process, which Selye termed the "general adaption syndrome". The first stage is the alarm reaction in which, according to Selye (1936, 1956), when exposed to a stressor the adrenal medulla releases epinephrine and the adrenal cortex produces glucocorticoids, both of which help to restore homeostasis. Restoration of homeostasis leads to the second stage, resistance, in which defence and adaption are sustained and optimal. According to Selye (1936, 1956) if the stressor persists the final stage of exhaustion follows and the adaptive response ceases resulting in illness.

However, it soon became apparent that Selye's definition of stress failed to consider cognitive processes or psychological factors so further definitions were developed. Like the term "wellbeing", these further definitions have contributed to an inconsistent and confusing understanding of stress (Lazarus, 1993). McEwen (2005) also pointed out that the word *stress* is an ambiguous term as for some stress can come in the form of good stress offering excitement and challenges, whereas for others bad stress offers fatigue, frustration, and an inability to cope.

Lazarus, Deese, and Osler (1952) concluded that motivational and cognitive variables also needed to be considered when understanding individual differences that intervened between the stressor and the reaction. Thus, in combination with Selye's view of stress, Lazarus (1993) outlined four concepts when describing the physiological or psychological stress process: 1. a person – environment relationship, 2. a psychological evaluation coupled

with a physiological process, 3. a psychological coping process, and 4. a psychological and physiological reaction. Psychologically, Lazarus (1966, 1993) suggested stress is brought about by different antecedent conditions from the environment and within the person, with different consequences determined by what an individual perceives harmful, a threat, and a challenge. According to Lazarus (1966), *harm* refers to psychological damage that has already been done. *Threat* refers to the anticipation of harm that has not yet occurred but is imminent. *Challenge* refers to difficult demands and the level of confidence of overcoming them based on deploying coping resources.

The outcome of Lazarus's work paved the way for the current and most popular definition of psychological stress: "a relationship with the environment that the person appraises as significant for his or her wellbeing in which the demands tax or exceed available coping resources" (Lazarus & Folkman, 1986, p.63). According to Lazarus (1966) an individual's cognitive appraisal of an environmental situation will determine whether or not they will show a physiological stress response. Lazarus postulated that a person experiences the effects of stress when they perceive the demands of a situation to be beyond their perceived resources. A number of psychological studies have found that perceived stress is a better predictor of poorer health outcomes than exposure to particular stressors (Brosschot et al., 1998; Lazarus & Folkman, 1984).

Job Demands and the Relationship with Wellbeing

Karasek (1979), and Karasek and Theorell (1990) were the first to investigate the effects of occupational stress on physical and mental health. Karasek's (1979) Job Strain Model predicts that the greatest risk to physical and mental health from stress occurs to workers facing high job demands or pressures combined with low control or decision latitude in meeting those demands. According to Karasek and Theorell high job demands consists of workload demands such as time pressures, the amount of work, and conflicting demands.

Conflicting demands is defined as increased role responsibilities in which an individual is responsible for tasks outside of his/her scope of practice (Scheib, 2003).

Considerable evidence exists linking job strain to hypertension, coronary heart disease, and mental health issues. Karasek et al. (1988) investigated the association between job strain and the prevalence of myocardial infarction of 2424 participants as part of the longitudinal epidemiologic Health Examination Survey (HES). Karasek et al. analysed the HES database for participants' responses to a quality of employment survey. When controlling for age, race, education, smoking, serum cholesterol, systolic blood pressure, and physical exercise, Karasek et al. found employed males with jobs that are low in decision latitude and high in workload have a higher prevalence of myocardial infarction.

Karasek et al. findings are consistent with those of Collins, Karasek, and Costas (2005) who clinically tested a sample of 36 mid-aged males for the risk of cardiac disease related to job strain. Collins et al. participants filled out the Job Content Questionnaire (JCQ) (Karasek, Brisson, & Kawakami, 1998), kept diaries of their work activities over eight days, and were monitored by an electrocardiograph (ECG) for a total of 48 hours during their work day throughout the course of the eight days. Collins et al. found that high job strain and low decision latitude were associated with significant and persistent reductions in cardiac vagal control as indicated by heart rate variability, along with elevations in sympathetic control as measured by the ECG.

More recently, Ilies, Dimotakis, and Watson (2010) measured the daily workload and daily blood pressure of 67 fulltime employees with a mean age of 42.5 over 10 workdays. According to the medical literature, systolic blood pressure is a predictor of health (Benetos, Thomas, Safar, Bean, & Guize, 2001; Benetos et al., 2000). Ilies et al. found that workload amount was positively correlated with blood pressure levels and associated with low daily physical wellbeing.

These studies demonstrate a clear relationship between job strain and physical illness. Although cardiovascular disease is associated with a vulnerable population (e.g., the elderly; Uchino, Holt-Lunstad, Bloor, & Campo, 2005), the above studies demonstrate that decreased wellbeing due to abnormal blood pressure resulting from job strain can be experienced by a population that is not normally vulnerable to cardiovascular disease (Ilies et al., 2010).

The Wellbeing of Teachers

Studies on teacher wellbeing that focus entirely on physical and mental health issues are rare, as an overwhelming majority of the literature focuses on stress and burnout (Maslach, Schaufeli, & Leiter, 2001) that can contribute to or exacerbate physical and mental health issues. Teaching is considered a high job strain occupation (Bauer et al., 2005). Consistent with Karasek's (1979) and Karasek and Theorell's (1990) Job Strain Model, teachers face high job demands in the classroom in the form of student performance and behaviour management and outside the classroom in the form of increased administrative duties and responsibilities. The decision latitude component of the Job Strain Model applied to teachers is their ability to exert control over the factors that impact on their job.

Evidence has demonstrated that there is a high prevalence of anxiety, hypertension, headaches, psychosomatic disorders, and cardiovascular disease amongst teachers compared with other professions (Unterbrink et al., 2008). Furthermore, teachers themselves perceive their jobs as harmful to their health (Yang, Ge, Hu, & Wang, 2009). The importance of teacher wellbeing is not to be under-estimated. Van Petegem, Aelterman, Rosseel, and Creemers (2006) have found a direct link between teacher and student wellbeing when they carried out a classroom environmental study. This direct link suggests that a negative environment set by the teacher because of poor health can influence student performance and behaviour, promote dysfunctional interactions with other students, and contribute to low self-efficacy towards classroom tasks (Christenson, 1989).

Yang et al. (2009) administered the Short Form 36 Health Survey (SF-36), and the Occupational Stress Inventory (OSI) to 2929 teachers in China to examine the relationship between teacher physical and mental health and job strain. The SF-36 measures eight different dimensions of health: physical functioning, role limitations, general health perception, social functioning, emotional problems and mental health, vitality, and bodily pain. Yang et al. found that compared to general population norms, teachers scored significantly lower for physical functioning, role limitations, social functioning, vitality, bodily pain, and had a negative perception of their health. Yang et al. concluded that occupational stress induced the worsening of physical and mental health conditions and the quality of life of teachers deteriorates with age.

Focusing on mental health, Cropley, Steptoe, and Joekes (1999) examined the relationship between high and low job strain and psychiatric morbidity amongst 160 primary and secondary school teachers in Great Britain. Cropley et al. administered the Clinical Interview Schedule, which measures neurotic psychopathology (Lewis & Pelosi, 1990), and the Job Strain Questionnaire (Karasek & Theorell, 1990). As predicted, Cropley et al. found the prevalence of neurotic disorders was greater in high job strain teachers when compared with low job strain teachers. Cropley et al. discovered that the most prevalent psychiatric symptoms were fatigue, anxiety, irritability, worry, and panic attacks. Also of interest was the discovery that fatigue, anxiety, irritability, worry, and panic attacks were greater in low job strain teachers when compared with the general population from the National Psychiatric Survey.

Several German studies also examined the mental health status of teachers. Weber, Weltle, and Lederer (2004, 2006) and Weber and Lederer (2006) found that psychiatric and/or psychosomatic disorders are the leading causes of premature retirement of teachers. In a more recent German study, Bauer et al. (2007) examined the prevalence of mental health

problems in a sample of 949 teachers by applying the General Health Questionnaire (GHQ).

The GHQ developed by Goldberg, Cooper, Eastwood, Kedward, and Shepherd (1970) is a

valid and reliable instrument to measure minor physical and mental health symptoms. Bauer

et al. revealed 29.8% of their population sample scored high for mental health problems,

specifically depression and anxiety. Bauer et al. concluded mental health problems in the

sample were contributed by a high workload and contextual events related to their

professional work.

   To date, only three studies have been carried out to provide some indication of

physical and mental health status of New Zealand teachers. Manthei et al. (1996) examined

the health of 652 teachers using the GHQ over a four-year period. Manthei et al. found that

on average 47.8% of teachers had no or low physical and/or mental health problems, 20.8%

had mild to moderate health problems, and 31.4% had high to severe health problems, the

most prevalent of which was anxiety.

   As part of the nationwide New Zealand Health Survey 2002/03, Pledger, Cumming,

McDonald, and Poland (2009) examined the relationship between occupation and health

status of New Zealanders by administering the SF-36 to 6894 adult workers. Pledger et al.

results revealed that those participants working in occupations with an emotional component,

including teachers, were prone to stress that impacted negatively on their health.

   More recently, Denny et al. (2011) examined the effects of school environment on

students' risk-taking behaviours and wellbeing. Specifically, Denny et al. were interested in

the relationship between health risk-taking behaviours and depressive symptoms among

students and the psychosocial climate, school environment, teacher wellbeing, and the use of

school welfare services as reported by students, teachers, and school administrators. Denny et

al. randomly selected 9,056 students and 2,992 teachers and administrators from throughout

New Zealand secondary schools. The students were asked to complete online surveys that

examined depression, risk of suicide, motor vehicle risk behaviours, violence risk behaviours, substance use, and sexual health behaviours. The teachers and administrators were asked to complete online surveys examining school climate, student participation, student representation, work environment, wellbeing, burnout, and the referral rate of students to health services.

Denny et al. found that 27% of teachers had high levels of student-related burnout and 20% had poor emotional wellbeing. Denny et al. concluded that schools that promote teacher and student wellbeing had lower incidents of student risk-taking behaviour. Furthermore, schools where teachers reported higher levels of wellbeing were found to be associated with fewer depressive symptoms among students. Denny et al. study confirms and extends the Van Petegem et al., (2006) findings that there is a direct link between the wellbeing of the teacher and the wellbeing of students.

Teacher Stress

Teacher stress first entered academic literature in the mid-1970s from studies by Coates and Thoresen (1976); Dunham (1976); Kyriacou and Sutcliffe (1977). From the mid-1970s to the present day, research on teacher stress has reached global proportions and become voluminous (Kyriacou, 2000, cited in Kyriacou, 2010). The most popular and widely used definition of teacher stress is: "a negative emotional experience being triggered by the teacher's perception that their work situation poses a threat to their self-esteem or wellbeing" (Kyriacou & Sutcliffe, 1978).

Published investigations of teacher stress in New Zealand first emerged in the early 1980s by Galloway and colleagues. Galloway, Boswell, and Panckhurst (1981) postulated that teacher stress develops from the 'fit' between the teacher and their job becoming disrupted. Consistent with Kyriacou and Sutcliffe's (1978) definition, Galloway et al. (1981) suggest that if a teacher continues to work while the demands of their job are high and their

coping is low, their wellbeing will be compromised. Another study by Galloway, Panckhurst, Boswell, Boswell, and Green (1982) found one in eight New Zealand teachers described teaching as either very or extremely stressful. A follow-up study found the main source of stress were student misbehaviour and poor student progress; in other words, reduced teacher efficacy (Galloway, Panckhurst, Boswell, Boswell, & Green, 1984).

Moving into the mid-1980s the source and prevalence of stress began to change, and the presence of job demands became an obvious factor. Galloway, Panckhurst, Boswell, Boswell, and Green (1986) found from a survey of 40 participants that the main sources of stress were problems with time management and interpersonal relationships with teachers. Further studies by Dewe (1986); Manthei and Solman (1988); Manthei et al. (1996) revealed classroom management and job demands were found to be the main contributors to teacher stress. Since 2000, only two New Zealand studies have been published, however they have deviated away from teacher stress and focused on teacher burnout (Whitehead et al., 2000; Milfont et al., 2008).

Prevalence. The prevalence of teacher stress is consistent across international and New Zealand research. Teachers in different countries, of different grades, and over different time periods have all reported moderate to high levels of job stress (Fontana & Abouserie, 1993). Compared to the general population, teachers are at risk for higher levels of psychological distress resulting from stress and lower levels of job satisfaction (Travers & Cooper, 1993). Some argue that stress in teaching has increased over the years (Borg, 1990; Hanson, 1971; Hargreaves, 1978).

Kyriacou and Sutcliffe (1977a, 1978a, 1979a, 1979b) carried out four studies over a three-year period in which teachers were asked to report on the level of perceived stress in their job. Teachers were randomly selected from a number of schools in England and were requested to rate their response to a single item questionnaire asking "In general, how

stressful do you find being a teacher?" on a five point scale labelled "not at all stressful", "mildly stressful", "moderately stressful", "very stressful', and "extremely stressful".

In the first study, Kyriacou and Sutcliffe (1977a) found that of the 109 respondents, 29.3% considered their job as either very stressful or extremely stressful. The results of the second study (Kyriacou & Sutcliffe, 1978a) indicated that 19.9% of the 257 respondents rated their job as either very stressful or extremely stressful. The third study, Kyriacou and Sutcliffe (1979a) found of the 218 respondents, 23.4% found their job either very stressful or extremely stressful. The fourth and final study (Kyriacou & Sutcliffe, 1979b) showed 30.7% of 130 teachers rated their job as either stressful or extremely stressful. Across all studies, Kyriacou and Sutcliffe found between only 1.8% and 4.7% indicated their job was not stressful at all.

In New Zealand, Manthei et al. (1996) examined the stress of teachers over four years in the same eight schools. Manthei et al. employed Laughlin's (1984) 24 item Stress in Teaching Questionnaire. The Stress in Teaching Questionnaire measures stress over two sections. The first section asked teachers to respond to the degree of tension, anxiety, and pressure experienced by them along with experiences of apprehension, fear, mental discomfort, inability to cope, and unhappiness etc. Teachers were asked to respond to the question "as a teacher, how great of a source of stress are these factors to you"? Teachers had the option to respond to "no stress", "mild stress", "moderate stress", "much stress", and "extreme stress". The second section measured stress as a teacher. Teachers were asked to rate how generally stressful they found being a teacher, with responses ranging from "not at all", "mildly stressful", "moderately stressful", "very stressful", and "extremely stressful".

In New Zealand, Manthei et al. found over the four-year period 1987–1990, an average of 26.1% of teachers felt that teaching was very or extremely stressful. Manthei et al. also found that stress was significantly positively correlated ($r = .49$) with job dissatisfaction.

More recently Phillips, Sen, and McNamee (2007) investigated the prevalence of teacher stress in West Sussex, United Kingdom. Teachers ($N = 290$) responded to Phillips et al. request to complete (the) A Short Stress Evaluation Tool (ASSET) produced by Cartwright and Cooper (2002). The ASSET is a validated questionnaire which is widely used both academically and commercially for the measurement of stress. Like the previous studies mentioned above, the ASSET requires participants to rate stress from "not at all, "mildly stressful", "moderately stressful", "very stressful", and "extremely stressful". Phillips et al. found 43% of teachers considered their job either very stressful or extremely stressful.

The above studies clearly demonstrate the extent of stress as a global concern and confirm Borg's (1990) and Travers and Cooper's (1996) findings that on average one-third of teachers perceive their occupations as highly stressful. Furthermore, teacher stress is a significant contributor to physical and mental health issues (Bowers, 2004), and eventually teacher stress can lead to absenteeism and early retirement (Bowers, 2004; Darr & Johns, 2008; Galloway et al., 1984; Harrison & Martocchio, 1998). However, it should follow that in recognising the prevalence of teacher stress, understanding the sources of stress should be the next step.

Sources of Teacher Stress. A number of studies have identified two main sources of stress (Benmansour, 1998; Geving, 2007; Pithers & Soden, 1998; Travers & Cooper, 1996). The first is personal factors in the form of teacher efficacy. Stress from low teacher efficacy is characterised by the teacher being unable to maintain discipline and respond to students who often display challenging behaviour and lack motivation. The second is organisational factors in the form of job demands that impact on the teacher's role. Work overload and, more recently, increased role responsibility have been identified as the components of job demands that have the most impact on teachers.

Teacher Efficacy. Teacher efficacy is defined as "the extent to which the teacher believes he or she has the capacity to affect student performance" (Bergman, McLaughlin, Bass, Pauly, & Zellman, 1977, p. 137). Or, as Guskey and Passaro (1994) suggest, teacher efficacy is the belief in which the teacher can influence or control how well students learn and manage difficult behaviour. Teacher efficacy stems from Bandura's (1977, 1986) social cognitive theory referring to beliefs about one's ability to successfully produce a desired outcome, otherwise known as self-efficacy. In recent times a number of international studies have been published that have identified teacher efficacy as a significant contributor to teacher stress and burnout (Friedman, 2006; Lee & Ashforth, 1996). Research has demonstrated that teachers with high levels of self-efficacy are at less risk of stress and burnout than teachers with low levels of self-efficacy (Betoret, 2006; Egyed & Short, 2006; Tsouloupas, Carson, Matthews, Grawitch, & Barber, 2010).

Betoret (2006) examined the relationship between teacher self-efficacy, stress, burnout and coping in a sample of 247 secondary school teachers in Spain. Teachers were asked to indicate their agreement to statements on a six-point Likert scale, with response options ranging from "totally agree" to "totally disagree". Examples of items for the scale are: "I consider that I am sufficiently prepared to carry out my job properly"; "I find it difficult to maintain order and discipline in the classroom"; "I recognise that I am not equipped to face all the demands that are made on me as a teacher"; "I have sometimes had the feeling of not being cut out for this profession". Teachers were also asked to complete a coping resource scale, which identified their method of coping strategy to overcome stress. Finally, teachers were asked to complete a stress and burnout scale. As predicted, Betoret (2006) found that either reduced teacher efficacy and/or poor stress coping skills were associated with teacher stress and burnout.

In an American study, Tsouloupas et al. (2010) examined teacher efficacy of managing student misbehaviour by exploring the relationship between teacher perceptions of student misbehaviour and emotional exhaustion. The participants were 610 fulltime elementary ($N = 300$), middle school ($N = 115$), and high school ($N = 195$) teachers. Teachers were asked to respond to a teacher perception of student misbehaviour scale, which assesses student discipline issues. They were also asked to respond to a teacher efficacy scale, and the Maslach Burnout Inventory. Tsouloupas et al. found that the teacher perception of student misbehaviour was directly and positively associated with emotional exhaustion. Tsouloupas et al. also found that perception of student misbehaviour is a stressor that significantly predicts compromised mental health.

These studies suggest that individual characteristics such as teacher efficacy predispose teachers to perceive student misbehaviour in ways that either discourage or facilitate teachers' adaption and reaction to managing misbehaviour (Kokkinos, 2007). Thus, according to Tsouloupas et al. (2010) teachers with higher efficacy in handling student misbehaviour are likely to be more responsive when faced with challenging behaviour than teachers with low levels of efficacy in handling student misbehaviour.

Job demands in the form of role overload. In the general organisational and industrial literature a number of studies have demonstrated work stress in the form of role ambiguity, role conflict, and role overload is highly detrimental to individual wellbeing (Beeher, et al., 1976; Conley & You, 2009). According to Sutton (1984), role overload is when the role demands for the teacher becomes excessive. In education, Reyes and Imber (1992) suggest role overload is the most important factor that requires attention when addressing teacher role stress. Reyes and Imber (1992) found that differences in morale, job satisfaction, and commitment existed between teachers who perceived a heavy workload and those that perceived their workload was manageable. Furthermore, Hargreaves (1994) and

Lachman and Diamant (1987) found that teacher burnout was mediated by role overload and intent to leave the profession.

In New Zealand, Dewe (1986) carried out a comprehensive study to determine the sources and implications of teacher stress. Teachers ($N = 800$) from randomly selected schools were asked to fill out two surveys. The first survey was to identify all the causes and consequences of teacher stress. The second survey was to identify specific situations that New Zealand teachers found stressful. Dewe's study identified stressors over six domains: little individual control over different school events, expectations of parents, relationships in the classroom, unsupportive parents and difficult children, work overload, and physical demands of teaching. Dewe found that work overload ranked the highest and the most frequent of all six factors of sources of stress. Dewe also found that work overload was the most significant factor for implications of stress in which anxiety and tiredness were more profound.

Conley and Woosley (1999) investigated the relationship between role overload and stress in education. They surveyed 371 teachers in twelve schools across a south western state in the United States of America. Conley and Woosley's participants were asked to complete a survey that measured their levels of job satisfaction that indicated the level of role overload, and another survey to measure stress levels. As predicted, Conley and Woosley found a very strong relationship ($r = .69$) between role overload and stress.

Phillips et al. (2007) also evaluated the sources of teacher stress in their study. In addition to filling out the ASSET, teachers were required to respond to an additional questionnaire that measured their level of job satisfaction and causes of stress specific to education. Phillips et al. identified work overload as one of the two main stressors along with work-life imbalance. Phillips et al. also found that the average amount of hours worked was

excessive. Furthermore, Phillips et al. results revealed that role overload was significantly higher when compared with the general population.

Dorman (2003) also suggested role overload was the most potent variable that impacted on teacher burnout (emotional exhaustion). Like Dewe's (1986) study, Dorman also examined all possible variables that contribute to teacher stress and ultimately burnout. Dorman's study consisted of 246 teachers from primary ($N = 99$), secondary ($N = 103$) and combined primary and secondary ($N = 44$) schools across Queensland, Australia. Dorman's participants were subjected to a test battery consisting of several instruments. The classroom environment was assessed with a 24 item instrument to determine the teachers' perceptions of their classroom psychosocial environment. The school environment was measured using a 36 item instrument. Teacher role including role conflict, role ambiguity, and role overload was assessed on a 5 item scale. Teaching efficacy was measured using a 7 item teacher efficacy scale and teacher self-esteem was measured using a self-esteem inventory. According to Dorman, all instruments were psychometrically valid and reliable with alpha coefficients ranging from .66 to .91.

Dorman's (2003) results were categorised into two factors that contributed to stress and burnout. The first factor was organisational variables, which consisted of role overload, classroom environment, role conflict, and role ambiguity. Dorman found that role overload was by far the strongest predictor ($\beta = .91$) of burnout. The second factor was personality traits, which consisted of external locus of control and teaching efficacy. Of personality traits, Dorman found that teaching efficacy was the strongest predictor ($\beta = .58$) of burnout. Dorman's study confirms that teacher stress and burnout is influenced by both organisational and individual variables.

Job demands in the form of increased role responsibility. More recently, increased role responsibility has become problematic for teachers. Ballard and Bates (2008); Ballet,

Kelchtermans, and Loughran (2006) suggest the teacher's role has changed in recent times due to accountability measures. According to Webb et al. (2004), since the introduction of the National Curriculum standards in England in 1988, teachers have been under intense pressure as a result of their work being controlled by target setting and national testing. Webb et al. (2004) point out schools and teachers have become accountable for student performance, which has had a considerable negative impact on the school experience of children because of the added pressure on schools.

According to Troman and Woods (2001) the consequence of accountability measures is that parents' view of education has changed from being in partnership with the school to being a consumer of the school in which they seek the best quality education for their children. Thus, selecting a school has become subject to performance and ratings. Troman and Woods (2001) further point out that accountability and performance measures have contributed to multiple and unrealistic demands on teachers.

Bailey (2000) also suggests that the teacher's role has expanded and responsibilities have increased outside the classroom and have intensified within the classroom. For example, Kiviniemi (2000) found in a small qualitative study that teachers' roles have changed to include characteristics similar to those of a social worker because of an increase in students' personal problems and problems experienced by parents resulting from social exclusion. Consequently, according to Kiviniemi, teachers' stress levels can increase and they can feel inadequate as a result of the changing demands and scope of their role.

Purpose of the Present Study

Teaching is considered a high job strain occupation, and there is a high prevalence of teacher stress that contributes to compromised wellbeing. Furthermore, reduced teacher efficacy and work overload have repeatedly been shown to be the leading predictors of teacher stress in both international and New Zealand contexts. Increased role responsibility is

an emerging factor that the international literature has found to influence teacher stress. The present study seeks to determine the physical and mental health status of teachers and the prevalence of stress. The present study also examines the relationship between physical health, mental health, stress, role overload, role responsibility, and teacher efficacy to determine the factor(s) that influence teacher stress and mental health levels. The following research questions are asked:

1. What is the physical and mental health status of teachers compared with the general population?

2. What factors influence changes in stress and mental health levels and can role responsibility be considered a factor that influences stress and mental health levels?

3. Has the prevalence of teacher stress changed since the results reported by Manthei et al. (1996)?

Method

Research Design

The current study employed a cross-sectional design to examine the relationship

between physical health, mental health, stress, job demands, and teacher efficacy. Online

retrospective psychometric scales were used for data collection.

Participants

Demographic information is presented in Table 1. Year 9–13 teachers from a random

selection of high schools were asked to participate. Year 9–13 teachers were selected as

based on suspension and expulsion rates teaching these students is considered to be the most

challenging for teachers (Ministry of Education, 2010). In total 13 schools agreed to

participate. The areas of Southland, Westland, Manawatu, Auckland, and Northland were

each represented by one school. Three were from Wellington and Otago and two were from

the Bay of Plenty. On February 22, 2011 Christchurch was struck with a catastrophic

earthquake. Canterbury schools were therefore omitted from random selection.

Table 1
Demographic Information of Participating Teachers (N = 131)

Gender	N	%	Ethnicity	N	%	Age Group	N	%
Male	40	30.5	NZ	113	86.3	20-29	13	9.9
Female	91	69.5	Maori	8	6.1	30-39	38	29.0
			Poly	1	0.8	40-49	37	28.2
			Other	9	6.9	50-59	32	24.4
						60+	11	8.4

Instruments

Demographic information was collected using a survey that included gender,

ethnicity, age range, number of years teaching, school decile, and number of hours worked

(Appendix A).

The Short Form 36 Health Survey (SF-36) (Ware, Snow, Koskinski, & Gandek 1993) was used to measure the physical and mental health levels of teachers (Appendix B). The SF-36 takes 5 to 10 minutes to complete and consists of 36 items, measuring physical and mental health status in relation to eight health scales: physical functioning, role limitation (physical), bodily pain, general health perceptions, vitality (energy/fatigue), social functioning, role limitation (emotional) and general mental health. Scott, Tobias, and Sarfati (1999) and Scott, Sarfati, Tobias, and Haslett, (2000) employed the SF-36 to study an adult sample of 7,862 for the 1996/97 New Zealand Health Survey and established population norms. Scott et al. (1999) concluded that the SF-36 was a valid and reliable measure for the New Zealand population. Scott et al.'s (2000) results demonstrated that the SF-36 has good construct validity and good internal consistency with a mean of .73 across all eight scales.

The 10 item Perceived Stress Scale (PSS-10) (Cohen, Kamarck, & Mermelstein, 1983) was the measure employed to determine teacher stress (Appendix C). The PSS-10 takes two to five minutes to complete and is widely used, demonstrating good construct validity and internal consistency with most studies reporting Cronbach alpha scores between .83 and .85 (Cohen, Tyrrell, & Smith, 1993 and Roberti, Harrington, & Storch, 2006). In addition to the PSS, an 11th question was added but will be interpreted separately during analysis (Appendix D). Question 11 asks "in general, how stressful do you find being a teacher?" Participants could choose "not stressful at all", "mildly stressful", "moderately stressful", "very stressful", or "extremely stressful". This single question is based on the research of Kyriacou and Sutcliffe (1978) and is designed to subjectively gauge the severity of teaching as a stressful occupation.

Job demands was measured by the Occupational Role Questionnaire (ORQ) (Appendix E). The ORQ is a sub-scale of the Occupational Stress Inventory – Revised Edition (OSI-R) (Osipow, 1998). The ORQ includes six sub-scales: role overload, role

insufficiency, role ambiguity, role boundary, role responsibility, and physical environment. Each subscale consists of 10 questions. For the purpose of the current study, role overload and role responsibility were employed to measure job demands. The OSI-R demonstrates good internal reliability with alpha coefficients between .70 and .89 respectively.

Gibson and Dembo's (1984) Teacher Efficacy Scale (TES) was used to determine teacher efficacy in the classroom (Appendix F). The TES is a widely used 10 item instrument with six point Likert response format. The TES has demonstrated good reliability with studies reporting an alpha coefficient of .74 (Henson, Kogan, & Vacha-Haase, 2001).

Procedure

Before commencing data collection, the above scales were tested on a small sample of teachers ($N = 6$) within a North Island high school. The reason for this was to gauge the teachers' response for the appropriateness of the measures. Participants were also asked to rate the appropriateness of the survey questions. Results revealed that all respondents found the measures either very easy or easy to understand, all respondents had no issue with the survey length, and all respondents found the questions either mostly relevant or very relevant to them and their role. On the basis of these results it was felt that data collection could proceed.

Schools throughout New Zealand were randomly selected from a school directory obtained from the Ministry of Education website. The school principal's personal assistant was emailed (Appendix G) with a consent form (Appendix H) and the study information sheet (Appendix I) that explained the study and included participant rights. The school principal was required to provide informed consent to allow teachers to participate. Once consent was received, the principal's personal assistant distributed the information sheet to all year 9–13 teachers. If the teachers chose to participate the information sheet directed them to

the survey website in which participant rights were again explained. Consent was granted by

proceeding to the surveys. In total 142 teachers proceeded to the surveys.

Results

Of the 142 respondents, 11 participants were omitted because of excessive incomplete

data. Those participants that had minimal missing data were provided with the mean score of

the measure, thus 131 participants were able to be analysed. Statistical Package for the Social

Sciences (SPSS) 19.0 (SPSS Inc, Chicago, IL) was used for data analysis with an alpha level

of 5% for all statistical tests. As the SF-36 has been normalised to the New Zealand

population, raw scores were standardised to t-scores representing a mean of 50 and a standard

deviation of 10. A one sample Kolmogorov-Smirnov test was carried out to test the

distribution of data. The distribution of the data was found to be Gaussian with the exception

of role overload scores, which were marginally positively skewed. Therefore, it was decided

parametric statistics would be employed. Descriptive statistics along with the internal

consistency of each measure are presented in Table 2.

Table 2
Descriptive Statistics, Including, Mean Standard Error, Score Range, and Internal Consistency

	Mean	Std. Error	SD	Range Min-Max	Score Range	Alpha
SF36 Physical	50.00	.87	10.0	17.48-68.71	0-100	N/A
SF36 Mental	50.00	.87	10.0	28.21-69.41	0-100	N/A
Role Overload	36.22	.57	6.6	18.00-47.00	0-50	.78*
Role Respon.	31.37	.72	8.3	8.00.48.00	0-50	.82*
Perceived Stress	19.88	.47	5.3	4.00-32.00	0-40	.80*
Teacher Efficacy	27.20	.51	5.8	15.00-44.00	0-60	.63

* An alpha level of .70 was used for internal reliability of scales.

Cronbach alphas for the SF-36 physical and mental health domains could not be

obtained. However, Scott et al. (1999, 2000) concluded that the SF-36 is a valid and reliable

measure for the New Zealand population based on results from the 1996/97 New Zealand

Health Survey. Scott et al. (2000) results demonstrated that the SF-36 has good construct

validity and good internal consistency with a mean of .73 across all eight scales. It is also

noted that the Cronbach alpha for the teacher efficacy scale is below the recommended .70

To determine the status of physical and mental health of teachers, SF-36 *t*-scores were

ranked and divided into percentiles and compared with the general population as shown in

Table 3.

Table 3
Percentile Rank of SF-36 Physical and Mental Health Scores Compared with the General Population

Percentile	Physical Health		Mental Health	
	Present Study	NZ Population	Present Study	NZ Population
2.5	28.91	-	29.73	-
16	38.66	-	37.79	-
25	43.29	44.45	42.02	44.40
50	51.50	52.95	51.08	52.15
75	57.37	56.50	58.70	56.8
84	59.64	-	60.61	-
97.5	65.82	-	65.70	-

Working condition variables including number of years teaching (teaching

experience), number of hours worked, and school decile (level of funding) are presented in

Table 4.

Table 4
Working Condition Variables of Teachers

Years Teaching	*N*	%	Hours Worked	*N*	%	School Decile	*N*	%
< 1	6	4.6	0 – 10	1	.8	1	2	1.5
2 – 4	15	11.5	11 – 20	5	3.8	2	12	9.2
5 – 10	25	19.1	21 – 30	8	6.1	3	12	9.2
11 – 15	26	19.8	31 – 40	18	13.7	4	8	6.1
16 – 20	21	15.3	41 – 50	47	35.9	5	17	13.0
21 – 25	10	7.6	> 50	52	39.7	6	12	9.2
> 25	29	22.1				7	20	15.3

8	19	14.5
9	6	4.6
10	23	17.6

To determine the prevalence of teacher stress, an 11th question was added to the perceived stress scale, which asked teachers to rate from 0 (not stressful at all) to 4 (extremely stressful) how stressful teaching is. As illustrated in Figure 1, .8% indicated teaching is not stressful at all, 11.5% indicated teaching is mildly stressful, 48.1% indicated teaching is moderately stressful, 29.0% indicated teaching is very stressful, and 10.7% indicated teaching is extremely stressful.
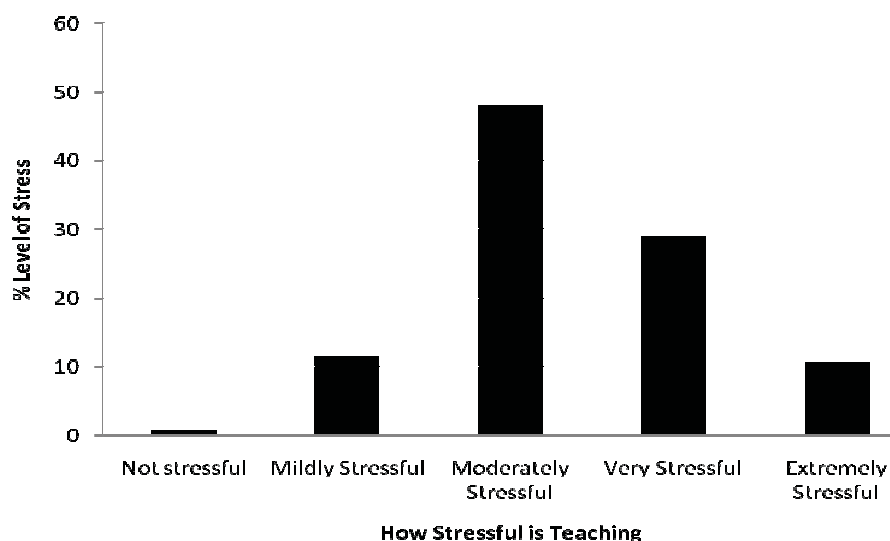
Figure 1. Response to Question 11 to Determine the Prevalence of Teacher Stress: In General How Stressful is Teaching as an Occupation?

A partial Pearson correlation was carried out controlling for gender and ethnicity to determine the relationship between all variables. Gender and ethnicity were controlled variables for two reasons. The first is the disparity of male/female participants ($N = 40/91$) and the second is because of caution about discriminating between gender and ethnic differences of health and stress levels. Thus, as presented in Table 5, variables correlated

included SF-36 physical health scores, SF-36 mental health scores, role overload scores, role

responsibility scores, perceived stress scores, and teacher efficacy scores.

Table 5
Correlation between SF-36 Scores, Role Scores, Perceived Stress Scores and Teacher
Efficacy Scores Controlling for Gender and Ethnicity

Variable	1	2	3	4	5	6
SF-36 Physical	-	.73***	-.18*	-.07	-.43***	.21*
SF-36 Mental		-	-.26*	-.21*	-.70***	.24*
Role Overload			-	.52***	.39***	.00
Role Respon.				-	.30**	.08
Perceived Stress					-	-.14
Teach. Efficacy						-

*Correlation is significant p < .05 level (2-tailed).
** Correlation is significant p < .01 level (2-tailed).
*** Correlation is significant p < 0.01 level (2-tailed).

   All correlations discussed are significant. A positive relationship was found between

physical health and mental health $r(127) = .73$, $p < .001$. However, physical health and

perceived stress was negatively related $r(127) = -.43$, $p < .001$. A negative relationship

between physical health and role overload was found $r(127) = -.18$, $p < .05$ and there was a

positive relationship between physical health and teacher efficacy $r(127) = .21$, $p < .05$.

Negative relationships were found between mental health and role overload $r(127) = -.26$, p

$< .05$, mental health and role responsibility $r(127) = -.21$, $p < .05$, and mental health and

perceived stress $r(127) = -.70$, $p < .001$. However, the relationship between mental health and

teacher efficacy was positive $r(127) = .24$, $p < .05$. The relationships between role overload

and role responsibility $r(127) = .52$, $p < .001$ and role overload and perceived stress $r(127) =$

$.39$, $p < .001$ were positive. A positive relationship was found between role responsibility and

perceived stress $r(127) = .30$, $p < .01$ and finally, perceived stress and teacher efficacy was negatively related $r(127) = -.14$, $p < .05$.

Two hierarchical linear regression analyses were conducted to predict the change in teachers' mental health and stress levels. The order of predictors of each outcome was determined by the evidence that affects the mental health and stress levels of teachers. All regressions are presented in Table 6. The first regression was to predict the change in teachers' mental health in which the independent variables were entered in five blocks: perceived stress, physical health, role overload, teacher efficacy, and role responsibility. Model 1 demonstrated that an increase in perceived stress significantly predicted a decline in mental health levels, which explained 49% of the variance of mental health levels $F(1,129) = 125.47$, $p <.001$. The addition of physical health in Model 2 led to a 22% increase in the amount of variance explained in mental health levels with both variables emerging as significant predictors $F(2,128) = 157.51$, $p <.001$. Model 2 suggests an increase in physical health predicted an increase in mental health levels, which is mediated by stress. The remaining variables did not significantly predict a change in mental health levels.

The second regression was to predict the change in teachers' stress levels in which the independent variables were entered in five blocks: mental health, role overload, teacher efficacy, role responsibility, and physical health. Model 1 demonstrated that improved mental health significantly predicted a decrease in stress levels, which explained 49% of the variance of stress levels $F(1,129) = 125.47$, $p <.001$. The addition of role overload in Model 2 led to a 4.8% increase in the amount of variance explained in stress levels with both variables emerging as significant predictors $F(2,128) = 75.51$, $p <.001$. The second regression suggests improved mental health predicted a decrease in stress; however, an increase of role overload predicted an increase in stress. The remaining variables did not significantly predict a change in stress levels.

Table 6
Hierarchical Regression Analysis Predicting Mental Health and Stress Levels

Model	Variable Added	R^2	Adjusted R^2	β
Mental Health				
1	Stress	.49	.49	-.70***
2	Physical Health	.71	.71	.52***
3	Role Overload	.71	.71	.02
4	Teacher Efficacy	.72	.71	.07
5	Role Respon.	.72	.71	-.06
Stress				
1	Mental Health	.49	.49	-.70***
2	Role Overload	.54	.53	.23***
3	Teacher Efficacy	.54	.53	.01
4	Role Respon.	.54	.53	.07
5	Physical Health	.55	.54	.14

Note: *$p < .05$, **$p < .01$, ***$p < .001$

A path analysis was carried out with AMOS Version 19 (Arbuckle, 2010) to determine the relationship between exogenous variables and the influence they have on the two endogenous variables. The model (Figure 2) demonstrated statistically significant goodness of fit χ^2 (6, $N = 131$) = 7.00, $p = .32$. However, Kline (2005) recommends employing further indices to measure model fit including the normed fit index (NFI), the incremental fit index (IFI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA). Table 7 shows the level of acceptable fit and the fit indices for the research model in this study, which all demonstrate acceptable levels.

Table 7
Fit Indices for the Research Model

Fit Index	Level of Acceptable Fit	Research Model
NFI	$>.90$	.97
IFI	$>.90$	1.0
CFI	$>.90$	1.0
RMSEA	$<.06$	.04

The path analysis revealed role responsibility directly influenced stress $\beta = .17$, $p = .04$ suggesting as teachers' role responsibility increases their stress levels also increase. Role responsibility also directly influenced mental health $\beta = -.15$, $p = .009$ which indicates as role responsibility increases, teachers' mental health levels deteriorate. Role overload was found to directly influence stress $\beta = .21$, $p = .003$ indicating as teachers' workload increases, their stress levels also increase. The physical health of teachers was found to influence stress in a positive way $\beta = -.40$, $p < .000$ which suggests that as teachers' physical health improves stress levels decline. Physical health was also found to directly influence mental health $\beta = .72$, $p < .000$ which demonstrates as physical health improves, mental health also improves.

Finally, the model shows a strong bi-directional negative relationship between stress and mental health $r = -.59$, $p = .000$. This suggests as stress levels increase there is deterioration in mental health, and when mental health improves, stress levels decrease.
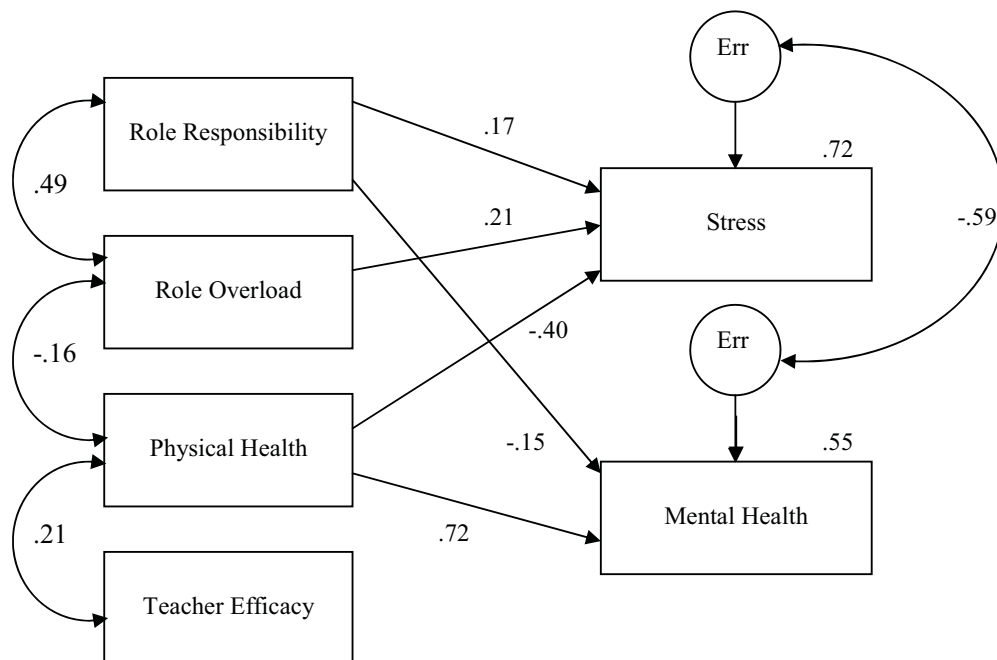

Figure 2. Path Analysis Model Indicating Direct Paths that Influence Stress and Mental Health.

Discussion

The present study examined the wellbeing of New Zealand teachers, in particular the relationship between physical health, mental health, stress, job demands, and teacher efficacy. Under examination was the physical and mental health status of teachers compared to the general population and factors that influence the mental health and stress levels of teachers. Finally, the present study investigated whether role responsibility is a factor that contributes to the mental health and stress levels of teachers.

The first research question sought to determine the physical and mental health levels of teachers in comparison to New Zealand population norms. The physical and mental health of New Zealand teachers has not previously been evaluated and compared with standardised population norms; therefore the present study presents baseline data. The results indicated minor insignificant differences of 1 to 2 points either above or below the scores of the general population norms. This result differs from international trends. Yang et al. (2009) found the physical health of teachers in China was significantly lower than the general population and Cropley et al. (1999) found the mental health of teachers was significantly lower than the general population of Great Britain. By employing a non-standardised measure, Manthei et al. (1996) also found New Zealand teachers scored in the high to severe range for mental health symptoms.

There may be a number of explanations for these discrepancies. According to Sarfati et al. (1999) results from the 1996/97 New Zealand Health Survey found the New Zealand population showed higher levels of self-reported physical and mental health as indicated by SF-36 scores in comparison to overseas general population norms. This is consistent with international data from the Mercer Quality of Living Survey (2010) in which New Zealand cities are highly ranked for quality of living. Furthermore, New Zealand data form the Quality of Life Survey (Nielsen, 2011) indicated 92% of New Zealand residents' rate their

quality of life positively. Another reason found by Sarfati et al. (1999) and findings from the 2002/03 New Zealand Health Survey (Pledger et al., 2009) suggested those who are in professions requiring an education also tend to have higher SF-36 scores.

In explaining the improvements in mental health symptoms found in the present study compared to Manthei et al. (1996) is the finding that the physical health of teachers had a significantly strong and positive influence on stress and mental health levels. This suggests that those teachers who did report good physical health tended to have decreased stress and improved mental health. A likely explanation for this finding is the development of health promotion initiatives over the last 30 years. According to Wise and Signal (2000), positive changes have been made in health policies, environments and structures, and in some cases health services have been reoriented. In addition, specialised workforce education programmes in mental health, environmental health, health promotion, and health economics have been developed (Ministry of Health, 1997; Salmond & Bowers, 1997). Consequently, health promotion initiatives have helped improve the health status of the New Zealand population (Ministry of Health, 1998).

The second research question examined the factors that influenced the stress and mental health levels of teachers. The four exogenous variables included in the present study were selected because of previous and recent interest in teacher wellbeing, and stress and burnout studies. Having already discussed the influence of physical health on stress and mental health, the remaining exogenous variables consisting of role responsibility, role overload, and teacher efficacy will be discussed in that order.

Role responsibility is a relatively new variable that is emerging in teacher stress literature. The current study found that role responsibility had direct but weak influence by increasing stress and contributing to a deterioration of mental health. It is difficult to determine specifically the additional factors of a teacher's role that have contributed to

increased responsibility and this finding warrants further investigation. Previous international investigations have identified two areas of teaching that have contributed to increased role responsibility. The first is increased role responsibility due to social disruption. According to Scott, Stone, and Dinham (2001) restructuring of social services has had an impact on teachers as schools are increasingly seen as the appropriate agency to deal with the social problems of students and parents.

Secondly, the international literature suggests that teachers are faced with increased accountability. As pointed out by Ballet, Kelchtermans, and Loughran (2006) and Ballard and Bates (2008), Australian and United States teachers have become directly responsible for student performance because of the introduction of National Standards. Along with teacher performance there are a number of other factors that affect student performance, which is a subject outside the scope of the current study. However, according to Bachkirova (2005), there has been a dramatic increase in teacher stress as a result of increased pressure on them to perform and increased accountability.

The finding for role responsibility, albeit weak, still had an influence over stress and mental health levels. In relation to social disruption, a possible explanation for this weak finding is that only a small majority of teachers take on the extra responsibilities of social problems of students and parents. Another explanation is that there is suitable support for teachers to refer on to senior staff or to external agencies. If the introduction of National Standards is a factor, there are two possible explanations. The first is that National Standards is relatively young in New Zealand and it is possible that teachers are not experiencing the effects at this stage that are reported in the international literature; or if they are, there is adequate support to cope with such effects. Furthermore, not all school principals have implemented the National Standards into their schools. The present study did not determine whether schools were participating in the National Standard guidelines.

Role overload had a moderate direct influence on teacher stress. This result suggests that as teachers' workloads increase, their stress levels also increase. Like role responsibility, this study did not examine specific roles associated with role overload. Role overload was found to be strongly correlated with role responsibility, thus some of the variance explained for role overload could be due to the new role responsibility factors mentioned above. However, over the last 30 years role overload has been a consistent contributor to teacher stress according to the national and international literature. Therefore there are elements of the teachers' role that have consistently contributed to role overload and consequently stress which, according to Karasek and Theorell (1990), are time pressures, administrative duties, and extracurricular activities.

Role overload is associated with spending more time to complete tasks (Bacharach, Bamberger, & Conley, 1990). The present study indicates that role overload influences teachers by also examining the amount of time teachers spend at their job. It was discovered 35.9% of the sample worked between 41 and 50 hours per week and 39.7% worked over 50 hours per week respectively. This finding is consistent with Phillips et al. (2007) who found amongst their 186 participants the average hours worked was 57.5 per week. Ingvarson et al. (2005) report for the New Zealand Ministry of Education also found teachers were on average working 47 hours a week and middle managers were working on average 52 hours per week.

Teachers' working hours appears excessive. However, the explanation provided by Dibbon (2004) is that teachers' work is complex due to uneven patterns of demands on their time. Dibbon (2004) further points out that at one extreme teachers can afford extra time during holiday periods to plan and prepare for instruction without the pressure of other work demands. At the other extreme Dibbon suggests it is common for teachers to spend an extra 24 to 28 hours every two to three weeks during the reporting period preparing and reporting

to stakeholders, which is on top of their normal duties during the school term. As pointed out by Harvey and Spinney (2000), in between these extremes it is normal for teachers to work around 50 hours each week, half of which are spent engaged in the function of intense interpersonal interactions in a highly diverse classroom. Harvey and Spinney (2000) suggest carrying out this function and performing their role well requires a number of specific tasks from teachers, which is one of the highest sources of teacher stress.

A bi-directional relationship between role overload and physical health was found suggesting that as teachers' workloads increase, their physical health deteriorates and as their workloads decrease, their physical health improves. Teaching is not considered a physically demanding occupation and role overload is commonly associated with overuse injuries such as foot and back pain (Ilmarinen, 1994). However, in explaining the relationship between role overload and physical health is the possibility that those teachers who do experience concurrent physical health issues and role overload adopt lifestyle behaviours such as a poor diet consisting of fast-food because of time constraints, and lack of exercise also because of time constraints. This explanation is consistent with Hellerstedt and Jeffery (1997) who found smoking, obesity, dietary fat intake, and inactivity are associated with high job demands.

The most surprising finding in the present study was that teacher efficacy did not have an influence over stress and mental health. This finding goes against national and international literature and this result should be interpreted with caution as the alpha level for the TES was marginally below the required .70. Nonetheless, it is well documented that teachers' inability to manage the classroom environment is a significant factor that contributes to stress and subsequent mental health issues. However, having demonstrated the positive outcomes from increased physical health, physical health was found to be positively correlated with teacher efficacy suggesting a high level of physical health is associated with high teacher efficacy.

Another possible explanation as to why teacher efficacy did not influence stress and mental health levels could be because of the development of teacher training over the years, and the way teachers are inducted into the profession. In the 1970s when teacher efficacy was first studied, new teachers held a trained teachers certificate and were just left to their own devices (Main & Hill, 2007), consequently, support was limited. In the early 1990s Manthei et al. (1996) found 79.5% of teachers were qualified with a diploma and teacher efficacy was a significant contributing factor to teacher stress. Nowadays 62% of New Zealand teachers' hold a bachelor's degree or higher (Kane & Mallon, 2006). In a New Zealand study of teacher efficacy, Hansen (2006) found the teacher's academic qualification provided the strongest base for teacher efficacy. Furthermore, according to Hansen (2006), those teachers with higher qualifications also demonstrated higher self-efficacy in relation to teaching subjects that were not familiar to them.

In contrast to the "sink or swim" approach in the 1970s (Main & Hill, 2007), teachers today are entering the classroom better equipped than ever to manage the classroom environment. Teachers are also inducted into the teaching profession with the support of a mentor, which is another reason why self-efficacy might not have influenced stress and mental health levels. Renwick (2001) reviewed the level of support provided to a random sample of new teachers and discovered between 76% and 87% of teachers found it useful having a mentor with whom discussing teaching practices and monitoring student progress was common.

The third and last research question examined whether the prevalence of teacher stress has changed since Manthei et al. (1996) results. The present study found 39.7% of teachers considered teaching either very or extremely stressful. This is a 13.6% increase on Manthei et al. (1996) results from a similar sized population sample. According to Klassen and Chiu (2010), teachers who report higher overall teaching stress had lower job satisfaction, poorer

teacher–pupil rapport, lower levels of effectiveness (Kokkinos, 2007) and are at greater risk of leaving the profession (Ingersoll, 2001). Previous studies have found teacher stress and compromised mental health can eventuate or be exacerbated from within the classroom and/or the organisation. The increase in stress found in the present study should be of concern to school principals and policy makers, as the results indicate the factors that contribute to increased stress and compromised mental health are organisational variables – increased role responsibility and role overload.

Implications for Teachers and Policy Makers

This study confirms previous findings on the stressful nature of teaching and extends previous research on the factors that contribute to stress and mental health levels. Moreover, the current study exposes obvious problems and solutions. The results provide further evidence that organisational factors contribute heavily to teacher stress and also provide evidence to teachers, school principals, administrators, and policy makers that a school-wide approach is required to reduce such stressors. Firstly, an adjustment to teachers' workloads requires serious consideration. For the last 40 years work overload has been demonstrated to be the leading contributor to teacher stress and it is not about to disappear. The workload issue in New Zealand was reviewed in 2005 by the Australian Council for Educational Research with plausible recommendations made to mitigate the problem (refer to Ingvarson et al., 2005). However, it is unknown if these recommendations have become policy or are voluntary, therefore if change is to occur it needs to be lobbied for.

Secondly, the extended finding that role responsibility is a factor that contributes to stress and compromised mental health indicates teachers' roles have altered their scope of responsibility/practice. The implication of this alteration is that conflict occurs between two different roles – in the teachers' case, responding to the needs of students in the classroom and the needs of the school, versus responding to social needs of students and parents. Thus,

teachers struggle to fulfil a role they are not trained to do. Spjeldnes, Koeske, and Sales (2010) found there is no apparent buffering between teachers and external student social issues and suggest social workers can work with parents more effectively to manage social issues. For some time New Zealand teachers have expressed a need for social workers in schools. On behalf of the Ministry of Education, McCauley and Roddick's (2001) evaluation of school support strongly suggested the implementation of social workers in schools based on teacher discussions. To date, an evaluation of implementation and effectiveness of social workers in schools has not been located.

Without the implications of expedience, an immediate solution for teachers to help mitigate stress and mental health issues is the implementation of compulsory supervision. Whitehead et al. (2000) offered recommendations to mitigate teacher stress that included: (1) the provision for greater personal guidance and support for teachers, and (2) ongoing balanced living support, stress management programmes, and coping strategies. Whitehead et al. (2000) recommendations are consistent with other vocations such as counselling, psychology, mental health nursing, and social work, all of which have an emotional component attached. Thus, as part of their employment agreement, practitioners have an ethical obligation to have their practice supervised to ensure the practitioner maintains a self-care plan for optimal wellbeing. In New Zealand it is not an ethical or professional requirement for teachers to engage in supervision other than when a new graduate teacher is being inducted into the profession (Renwick, 2001). Furthermore, the current provisions for teachers who experience stress and health issues extend no further than the standard sick leave built into employment agreements (Ministry of Education, 2009). The results of the present study support the implementation of compulsory supervision, suggesting a higher level of physical wellbeing is likely to help mitigate stress and mental health issues.

Limitations and Future Research

The present study has two important limitations. Firstly, self-report measures were employed to collect data and consequently common method bias may influence the results. Furthermore, using self-report measures to assess perceived stress may lead to the issue of drawing causal conclusions. The study of teacher stress often creates interest and therefore responding to self-report measures may lead participants to over-estimate the impact of their work, or participants may attribute stress from other areas of their life to their work. The same can be said about the other measures that evaluated participant health, teacher efficacy and organisational factors. Secondly, a cross-sectional design was used, which provided a snapshot of the factors included in the study at the present time and these factors may change over time. As discovered in the present study, role responsibility is a new factor that predicted compromised stress; teacher efficacy, which is a common factor, had no influence at all.

Future research should employ a longitudinal design to capture the changing factors that contribute to stress and mental health issues over time. Furthermore, these factors need to be defined. For example, role overload is characterised by a number of sub-factors consisting of administration, extra tuition, sporting activities, marking, and instruction preparation amongst others.

Future research should also employ valid and reliable medical measures to determine the status of stress and physical and mental health. According to Ilies et al. (2010), common method bias is greatly minimised when objective physiological measures are employed.

Conclusion

Teaching has long been regarded as a stressful occupation. Stressed teachers identified in the present study would benefit from supervision to facilitate positive coping skills. The stress placed on teachers due to increased workload and responsibility should not be ignored because of the resulting negative outcomes for both teachers and students.

Although the present study confirms and extends previous findings on teacher stress, a number of questions remain unanswered and solutions overlooked. Questions that remain unanswered are not about factors associated with teacher stress and mental health, but about the outcomes from Ministry of Education reviews that offered plausible solutions to support teachers affected by stress and mental health issues. Ownership of the teacher stress problem needs to occur at a government and school management level, as placing the responsibility on teachers for what over the years has been demonstrated to be an organisational issue will not lead to change.

References

Antone, D. (1994). The times: A teacher's perspective on how education will change. *Education Canada, 34,* 34–37.

Arbuckle, J. L. (2010). *AMOS, version 19 (computer program).* Chicago: SPSS.

Bacharach, S. B., Bamberger, P. & Conley, S. C. (1990). Work processes, role conflict and role overload. *Work and Occupations, 17,* 199–228.

Bachkirova, T. (2005). Teacher stress and personal values: An exploratory study. *School Psychology International*, *26,* 340–352.

Bailey, B. (2000). The impact of mandated change on teachers. In N. Bascia & A. Hargreaves (Eds.), *The sharp edge of educational change: Teaching, leading, and the realities of reform* (pp. 112–128). New York: Routledge.

Ballard, K., & Bates, A. (2008). Making a connection between student achievement, teacher accountability, and quality classroom instruction. *The Qualitative Report, 13,* 560–580.

Ballet, K., Kelchtermans, G., & Loughran, J. (2006). Beyond intensification towards a scholarship of practice: Analysing changes in teachers' work lives. *Teachers and Teaching: Theory and Practice, 12,* 209–229.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84,* 191–215.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice Hall.

Bauer, J., Stamm, A., Virnich, K., Wissing, K., Muller, U., & Wirsching, M., & Schaarschmidt, U. (2005). Correlation between burnout syndrome and psychological and psychosomatic symptoms among teachers. *International Archives of Occupational and Environmental Health, 79,* 199–204.

Bauer, J., Unterbrink, T., Hack, A., Pfeifer, R., Buhl-Griehaber, V., Muller, U., … Wirsching, M. (2007). Working conditions, adverse events and mental health problems in a sample of 949 German teachers. *International Archives of Occupational and Environmental Health, 80*, 442–449.

Beehr, T. A., Walsh, J. T., & Taber, T. D. (1976). Relationship of stress to individually and organizationally valued states: Higher order needs as a moderator. *Journal of Applied Psychology*, *61,* 41–47.

Benetos, A., Thomas, F., Safar, M., Bean, K. E., Guize, L. (2001). Should diastolic and systolic blood pressure be considered for cardiovascular risk evaluation: A study in middle-aged men and women. *Journal of the American College of Cardiology, 37,* 163–168.

Benetos, A., Zureik, M., Morcet, J., Thomas, F., Bean, K., Safar, M., Ducimetiere, P., & Guize, L. (2000). A decrease in diastolic blood pressure combined with an increase in systolic blood pressure is associated with a higher cardiovascular mortality in men. *Journal of the American College of Cardiology, 35,* 673–680.

Benmansour, N. (1998) Job satisfaction, stress and coping strategies among Moroccan high school teachers. *Mediterranean Journal of Educational Studies, 3,* 13–33.

Bergman, P., McLaughlin, M., Bass, M., Pauly, E., & Zellman, G. (1977). *Federal programs supporting educational change: Vol. VII. Factors affecting implementation and continuation*. Santa Monica, CA: RAND. (ERIC Document Reproduction Service No. 140432).

Betoret, F. D. (2006). Stressors, self-efficacy, coping resources, and burnout among secondary school teachers in Spain. *Educational Psychology, 26,* 519–539.

Borg, M. (1990). Occupational stress in British educational settings: A review. *Educational Psychology, 10,* 103–126.

Bowers, T. (2004). Stress, teaching, and teacher health. *Education, 32,* 73–80.

Boyle, G. J., Borg, M. G., Falzon, J. M., & Baglioni, A. J., (1995). A structural model of the dimensions of teacher stress. *British Journal of Educational Psychology*, *65,* 49–67.

Bradburn, N. M. (1969). *The Structure of Psychological Well-Being*. Chicago: Aldine.

Bridges, S. (1992). *Working in Tomorrow's Schools: Effects on primary teachers - a Christchurch study*. Christchurch: Canterbury University.

Brosschot, J., Godaert, G., Benshop, R., Olff, M., Ballieux, R., & Heijen, C. (1998). Experimental stress and immunological reactivity: A closer look at perceived uncontrollability. *Psychosomatic Medicine, 60,* 359–361.

Campion, J., & Nurse, J. (2007). A dynamic view for wellbeing. *Australasian Psychiatry, 15,* 24–28.

Cartwright, S., & Cooper, C. L. (2002). *ASSET Management Guide*. Manchester: Robertson Cooper Ltd.

Chapman, D. P., Perry, G. S., & Strine, T. W. (2005). The vital link between chronic disease and depressive disorders. *Preventing Chronic Disease, 2,* 1–10.

Christenson, S. L. (1989). Scientific practitioner: Assessing student performance: An important change is needed. *Journal of School Psychology, 27*, 409–425.

Coates, T .J., & Thoresen, C. E. (1976). Teacher anxiety: A review with recommendations. *Review of Educational Research*, *46,* 159–184.

Collins, S. M., Karasek, R. A., & Costas, K. (2005). Job strain and automatic indices of cardiovascular disease risk. *American Journal of Industrial Medicine, 48,* 182–193.

Conley, S., & Woosley, S. A. (1999). Teacher role stress, higher order needs and work outcomes. *Journal of Educational Administration, 38,* 179–201.

Conley, S., & You, S. (2009). Teacher role stress, satisfaction, commitment, and intentions to leave: A structural model. *Psychological Reports, 105,* 771–786.

Cropley, M., Steptoe, A., & Joekes, K. (1999). Job strain and psychiatric morbidity. *Psychological Medicine, 29,* 1411–1416.

De Chavez, A. C., Backett-Milburn, K., Parry, O., & Platt, S. (2005). Understanding and researching wellbeing: Its usage in different disciplines and potential for health research and health promotion. *Health Education Journal, 64,* 70–87.

Darr, W., & Johns, G. (2008). Work strain, health, and absenteeism: A meta-analysis. *Journal of Occupational Health Psychology, 13,* 293–318.

Day, C., Elliot, B., & Kington, A. (2005). Reform, standards, and teacher identity: Challenges of sustaining commitment. *Teaching and Teacher Education, 21,* 563–577.

Denny, S. J., Robinson, E. M., Utter, J., Fleming, T. M., Grant, S., Milfont, T. L., … Clark, T. (2011). Do schools influence student risk-taking behaviors and emotional health symptoms? *Journal of Adolescent Health*, *48,* 259–267.

Dewe, P. (1986). An investigation into the causes and consequences of teacher stress. *New Zealand of Educational Studies*, *21,* 145–157.

Dibbon, D. (2004). *It's about time: A report on the impact of workload on teachers and students.* St. Johns, NL: Memorial University of Newfoundland.

Diener, E., Larsen, R. J., Levine, S., & Emmons, R. A. (1985). Intensity and frequency: Dimensions underlying positive and negative affect. *Journal of Personality and Social Psychology, 48,* 1253–1265.

Dorman, J. (2003). Testing a model for teacher burnout. *Australian Journal of Educational and Developmental Psychology, 3,* 35–47.

Dunham, J. (1976). Stress situations and responses. In Dunham, J. (Ed.) *Stress in Schools,* Hemel Hempstead: NAS/UWT.

Egyed, C. J., & Short, R. J. (2006). Teacher self-efficacy, burnout, experience and decision to refer a disruptive student. *School Psychology International, 27,* 462–474.

Fontana, D., & Abouserie, R. (1993). Stress levels, gender and personality factors in teachers. *British Journal of Educational Psychology, 63,* 261–270.

Friedman, I.A. (2006). Classroom management and teacher stress and burnout. In C.M. Evertson, & C.S. Weinstein (Eds.), *Handbook of classroom management: Research, practice, and contemporary issues.* Mahwah, NJ: Lawrence Erlbaum.

Galloway, D., Boswell, K., & Pankhurst, F. (1981). Stress in teaching. *National Education, 63,* 204–206.

Galloway, D., Panckhurst, F., Boswell, K., Boswell, C., & Green, K. (1982). Sources of stress for class teachers. *National Education, 64,* 164–169.

Galloway, D., Panckhurst, F., Boswell, K., Boswell, C., & Green, K. (1984). Mental health, absences from work, stress and satisfaction in a sample of New Zealand primary school teachers. *Australian and New Zealand Journal of Psychiatry, 18,* 359–363.

Galloway, D., Panckhurst, F., Boswell, K., Boswell, C. & Green, K. (1986). Sources of stress for primary school head teachers in New Zealand. *British Educational Research Journal, 12,* 281–288.

Geving, A. (2007). Identifying the types of student and teacher behaviours associated with teacher stress. *Teaching and Teacher Education, 23,* 624–640.

Gibson, S., & Dembo, M. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76,* 569–582.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24,* 386–396.

Cohen, S., Tyrrell, D. A. J., & Smith, A. P. (1993). Negative life events, perceived stress, negative affect, and susceptibility to the common cold. *Journal of Personality and Social Psychology Online*, *64,* 131–140.

Goldberg, D. P., Cooper, B., Eastwood, M. R., Kedward, H. B. & Shepherd, M. (1970). A

standardized psychiatric interview for use in community surveys. *British Journal of Preventive and Social Medicine, 24,* 18–26.

Guskey, T. R., & Passaro, P. D. (1994). Teacher efficacy: A study of construct dimensions. *American Educational Research Journal*, *31,* 627–643.

Hansen, S. (2006). I can't do everything! English teachers' efficacy beliefs. *International Journal of Learning, 13,* 53–60.

Hanson, D. (1971). The strain of front line service. *Times Educational Supplement, December,* 4.

Hargreaves, A. (1994). *Changing teachers, changing times: Teachers' work and culture in the post-modern age.* New York: Teachers College Press.

Hargreaves, D. H. (1978). What teaching does to teachers. *New Society, 43,* 540–542.

Harrison, D. A., & Martocchio, J. J. (1998). Time for absenteeism: A 20-year review of origins, offshoots, and outcomes. *Journal of Management, 24,* 305–350.

Harvey, A., & Spinney, J. (2000). *Life on & off the job: A time study of Nova Scotia teachers*. Halifax, NS: Saint Mary's University Time-Use Research Program.

Hellerstedt, W. L., & Jeffery, R. W. (1997). The association of job strain and health behaviours in men and women. *International Journal of Epidemiology, 26,* 575–583.

Henson, R. K., Kogan, L. R., & Vacha-Haase, T. (2001). A reliability generalization study of the Teacher Efficacy Scale and related instruments. *Educational and Psychological Measurement, 61,* 404–420.

Ilies, R., Dimotakis, N., & Watson, D. (2010). Mood, blood pressure, and heart rate at work. An experience-sampling study. *Journal of Occupational Health Psychology, 15,* 120–130.

Ilmarinen, J. (1994). Aging, work and health. In J. Snel, & R. Cremer (Eds.), *Work and aging: A European perspective* (pp. 47–64). London: Taylor & Francis, Ltd.

Ingersoll, R. (2001). Teacher turnover and teacher shortage. *American Educational Research Journal, 38,* 499–534.

Ingvarson, L., Kleinhenz, E., Beavis, A., Barwick, H., Carthy, I., & Wilkinson, J. (2005). *Secondary teacher workload study: Report*. Camberwell: ACER Press.

Kane, R.G., & Mallon, M. (2006). *Perceptions of teachers and teaching.* Wellington: Ministry of Education.

Karasek, R. (1979). Job decision latitude, job demands and mental strain: Implications for job redesign. *Administrative Science Quarterly, 24,* 285–308.

Karasek, R. A., Brisson, C., Kawakami, N. (1998). The job content questionnaire: An instrument for internationally comparative assessment of psychosocial job characteristics. *Journal of Occupational Health and Psychology, 3,* 322–355.

Karasek, R., & Theorell, T. (1990). *Healthy work*. New York: Basic Book.

Karasek, R. A., Theorell, T., Schwartz, J. E., Schnall, P. L., Pieper, C. F., & Michela, J. L. (1988). Job characteristics in relation to the prevalence of myocardial infarction in the US health examination survey (HES) and the health and nutrition examination survey (HANES). *American Journal of Public Health, 78,* 910–918.

Keown, P., McGee, C., & Oliver, D. (1992). *National survey of secondary schools.* In D. Mitchell (Ed.). Report No.5. Monitoring today's schools research project. Hamilton: University of Waikato.

Kiviniemi, K. (2000). *The reality of teaching work as a challenge to teacher training.* Report 14, English Summary (Helsinki, National Board of Education).

Klassen, R. M., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of Educational Psychology, 102,* 741–756.

Klette, K. (2000). Working-time blues. In C. Day, A. Fernandez, T. E. Hauge, & J. Moller

(Eds.), *The life and work of teachers*. London: Falmer Press.

Kline, R. B. (2005). *Principles and practice of structural equation modeling (2nd ed.).* New York: Guilford Press.

Kokkinos, M.C. (2007). Job stressors, personality and burnout in primary school teachers. *British Journal of Educational Psychology, 77,* 229–243.

Kovess-Masféty, V., Rios-Seidel, C., & Sevilla-Dedieu, C. (2007). Teachers' mental health and teaching levels. *Teaching and Teacher Education*, *23,* 1177–1192.

Kyriacou, C. (2000). *Stress-busting for teachers.* Cheltenham: Stanley Thornes.

Kyriacou, C. (2010). Teacher stress: Directions for future research. *Educational Review, 53,* 27–35.

Kyriacou, C. & Sutcliffe, J. (1977a). The prevalence of stress among teachers in medium-sized mixed comprehensive schools. *Research in Education, 18,* 75–59.

Kyriacou, C., & Sutcliffe, J. (1977). Teacher stress: A review. *Educational Review*, *29,* 299–306.

Kyriacou, C., & Sutcliffe, J. (1978a). Teacher stress: prevalence, sources, and symptoms. *British Journal of Educational Psychology, 48,* 159–167.

Kyriacou, C., & Sutcliffe, J. (1978). A model of teacher stress. *Educational Studies, 4,* 1–6.

Kyriacou, C., & Sutcliffe, J. (1979a). Teacher stress and satisfaction, *Educational Research, 21,* 89–96.

Kyriacou, C., & Sutcliffe, J. (1979b). A note on teacher stress and locus of control. *Journal of Occupational Psychology, 52,* 227–228.

Lachman, R., & Diamant, E. (1987). Withdrawal and restraining factors in teachers' turnover intentions. *Journal of Occupational Behavior, 8,* 219–232.

Laughlin, A. (1984). Teacher stress in Australian settings: The role of biographical mediators. *Educational Studies, 10,* 7–22.

Lazarus, R. S. (1966). *Psychological stress and the coping process.* New York: McGraw-

Hill.

Lazarus, R. S. (1993). From psychological stress to the emotions: A history of changing

outlooks. *Annual Reviews of Psychology, 44,* 1–21.

Lazarus, R. S., Deese, J., Osler, S. F. (1952). The effects of psychological stress upon

performance. *Psychological Bulletin, 49,* 293–317.

Lazarus, R. S., & Folkman, S. (1984). *Stress, Appraisal, and Coping.* New York: Springer.

Lazarus, R. S., & Folkman, S. (1986). Cognitive theories of stress and the issue of circularity.

In M. H. Appley and R. Trumbull (Eds.), (1986). *Dynamics of Stress. Physiological,*

Psychological, and Social Perspectives (pp. 63–80). New York: Plenum.

Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the

three dimensions of job burnout. *Journal of Applied Psychology, 81,* 123–133.

Lewis, G., & Pelosi, A. J. (1990). *Manual of the revised clinical interview schedule*, (*CIS-*

R). London: Institute of Psychiatry.

Main, S., & Hill, M. (2007). Culture of care: A chronology of New Zealand teacher

induction policy. *New Zealand Journal of Teachers' Work, 4,* 117–126.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of*

Psychology, 52, 397–422.

Manthei, R., Gilmore, A., Tuck, B., & Adair, V. (1996). Teacher stress in intermediate

schools. *Educational Research, 38,* 3–19.

Manthei, R., & Solman, R. (1988). Teacher stress and negative outcomes in Canterbury

state schools. *New Zealand Journal for Educational Research*, *23,* 145–163.

McCauley, L., & Roddick, S. (2001). *An evaluation of schools support.* Wellington: Ministry

of Education.

McConnell, R., & Jefferies, R. (1991). *Monitoring today's schools, Report No. 4: The first*

year. Hamilton: University of Waikato.

McEwen, B. S. (2005). Stressed or stressed out: What is the difference? *Journal of Psychiatry and Neuroscience, 30,* 315–318.

McGee, C., Keown, P., Oliver, D., & Mitchell, D. (1993). *Monitoring Today's Schools: Report No. 15, national survey of secondary schools II*. Hamilton: University of Waikato.

Mercer. (2010). *Quality of Living Survey.* Retrieved from http://www.mercer.com/press-releases/quality-of-living-report-2010.

Milfont, T. L., Denny, S. J., Ameratunga, S. N., Robinson, E. M., & Merry, S. N. (2008). Burnout and wellbeing: Testing the Copenhagen burnout inventory in New Zealand teachers. *Social Indicators Research, 89,* 169–177.

Ministry of Education. (1993). *The New Zealand Curriculum Framework.* Wellington: Learning Media.

Ministry of Education. (2009). *Service managers' collective agreement 2008-2010.* Retrieved from http://www.nzei.org.nz.

Ministry of Education. (2010). *Stand-downs, suspensions, exclusions and expulsions from school.* Retrieved from http://www.educationcounts.govt.nz/indicators/main/student_participation/schooling/80346.

Ministry of Health. (1997). *Strengthening public health action: A strategic direction to improve, promote and protect public health.* Wellington: Ministry of Health.

Ministry of Health. (1998). *Progress on health outcomes targets: Te haere whakamua ki nga whainga hau mo te hauora.* Wellington: Ministry of Health.

Moussavi, S., Chattereji, S., Verdes, E., Tandon, A., Patel, V., Ustun, B. (2007). Depression, chronic diseases, and decrements in health: Results from the world health surveys. *The Lancet,* 370, 851–858.

Nielsen, A. C. (2011). *Quality of life survey 2010 eight cities report.* Retrieved from

http://www.bigcities.govt.nz/pdfs/2010/Quality_of_Life_2010_Exec.pdf.

Osipow, S. H. (1998). *Occupational Stress Inventory Manual (professional version).* Odessa, FL: Psychological Assessment Resources.

Phelan, M. (2001). Physical health of people with severe mental illness. *British Medical Journal, 322,* 443–444.

Phillips, S., Sen, D., & McNamee, R. (2007). Prevalence and causes of self-reported work-related stress in head teachers. *Occupational Medicine, 57,* 367–376.

Pithers, R. T., & Soden, R. (1998). Scottish and Australian teacher stress and strain: A comparative study. *British Journal of Educational Psychology, 68,* 269–279.

Pledger, M., Cumming, J., McDonald, J., & Poland, M. (2009). The health status of New Zealand workers: An analysis of the New Zealand Health Survey 2002/03. *New Zealand Journal of Social Sciences Online, 4,* 55–70.

Renwick, M. (2001). *Support for beginning teachers.* Wellington: Ministry of Education Research Division. Retrieved 11/01/11 from http://www.educationcounts.govt.nz/.

Reyes, P., & Imber, M. (1992). Teachers' perceptions of the fairness of their workload and their commitment, job satisfaction, and morale: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education*, *5,* 291–302.

Roberti, J. W., Harrington, L. N., & Storch, E. A. (2006). Further psychometric support for the 10-item version of the Perceived Stress Scale. *Journal of College Counseling, 9,* 135–147.

Ryff, C. D. (1989). Happiness is everything, or is it? Exploration of the meaning of psychological well-being. *Journal of Personality and Social Psychology*, *57,* 1069–1081.

Salmond, G., & Bowers, S. (1997). *A report to the transitional health authority: Development of the pacific health workforce.* Wellington: Health Services Research

Centre.

Sarfati, D., Scott, K., Haslett, S., Johnston, G., & Hodges, I. (1999). *Taking the Pulse: The 1996/97 New Zealand health survey.* Wellington: Ministry of Health.

Scheib, J. W. (2003). Role stress in the professional life of the school music teacher: A collective case study. *Journal of Research in Music Education, 51,* 124–136.

Schneiderman, N., Ironson, G., & Siegel, S. D. (2005). Stress and health: Psychological, behavioral, and biological determinants. *Annual Review of Clinical Psychology, 1,* 607–628.

Scott, K. M., Sarfati, D., Tobias, M. I., & Haslett, S. J. (2000). A challenge to the cross-cultural validity of the SF-36 health survey: factor structure in Maori, Pacific and New Zealand European ethnic groups. *Social Science & Medicine, 51,* 1655–1664.

Scott, C., Stone, B., & Dinham, S. (2001). "I love teaching but…" International patterns of teacher discontent. *Education Policy Analysis Archives, 9,* 1–19.

Scott, K. M., Tobias, M. I., & Sarfati D. (1999). SF-36 health survey reliability, validity and norms for New Zealand. *Australian and New Zealand Journal of Public Health, 23,* 401–406.

Selye, H. (1936). A syndrome produced by diverse nocuous agents. *Nature, 138,* 32.

Selye, H. (1956). *The stress of life.* New York: McGraw-Hill.

Selye, H. (1976). *Stress in health and disease.* Reading, MA: Butterworth.

Smyth, J. (2001). *When are we being leaned on? The politics of sustaining a socio-critical policy analysis of teachers' work.* Paper presented at the Annual Meeting of the American Education Research Association, Seattle, Washington.

Spjeldnes, S., Koeske, G., & Sales, E. (2010). Teacher support as a buffer between interparental conflict and child social skills. *Early Child Development and Care, 180,* 335–346.

Sullivan, K. (1993). The myth of partnership: Educational reform and teacher

    disempowerment Part 1. *New Zealand annual review of education: Te*

    Arotake a Tau o Te Matauranga i Aotearoa, 2, 151–166.

Sutton, R. I. (1984). Job stress among primary and secondary schoolteachers: its relationship

    to ill-being, *Work and Occupations, 11,* 7–28.

Travers, C. J., & Cooper, C. L. (1993). Mental health, job satisfaction and occupational stress

    among UK teachers. *Work and Stress, 7,* 203–219.

Travers, C.J ., & Cooper, C. L. (1996). *Teachers under pressure: Stress in the teaching*

    profession. London: Routledge.

Troman, G., & Woods, P. (2001). *Primary teachers' stress.* London: Routledge.

Tsouloupas, C. N., Carson, R. L., Matthews, R., Grawitch, M. J., & Barber, L. K. (2010).

    Examining teachers' emotional regulation strategies as mediators between student

    disruptive behavior and teacher burnout. *Educational Psychology, 30,* 173–189.

Uchino, B. N., Holt-Lunstad, J., Bloor, L. E., & Campo, R. A. (2005). Aging and

    cardiovascular reactivity to stress: longitudinal evidence for changes in stress

    reactivity. *Psychology and Aging, 20,* 134–143.

Unterbrink, T., Zimmermann, L., Pfeifer, R., Wirsching, M., Brahler, E., Bauer, J. (2008).

    Parameters influencing health variables in a sample of 949 German teachers.

    International Archives of Occupational and Environmental Health, 8, 117–123.

Van Petegem, K., Aelterman, A., Rosseel, Y., & Creemers, B. (2006). Student perception as a

    moderator for student wellbeing. *Social Indicators Research, 83,* 447–463.

Ware, J. E., Snow, K. K., Kosinski, M., Gandek, B. (1993). *SF-36 health survey manual and*

    interpretation guide. Boston, MA: The Health Institute.

Warr, P. B. (1987). *Work, unemployment, and mental health*. Oxford: Oxford University

    Press.

Webb, R., Vulliamy G., Hamalainen, S., Sarja, A., Kimonen, E., & Nevelainen, R. (2004). A comparative analysis of primary teacher professionalism in England and Finland. *Comparative Education, 40,* 83–107.

Weber, A., & Lederer, P. (2006). Morbidity and premature unfitness for duty of teachers at professional schools. *Insurance Medicine, 58,* 22–28.

Weber, A., Weltle, D., & Lederer, P. (2004). School principals too ill for healthy schools? *Insurance Medicine, 56,* 17-24.

Weber, A., Weltle, D., & Lederer, P. (2006). Ill health and early retirement among school principals in Bavaria. *International Archives of Occupational Health, 78,* 325–331.

Whitehead, A., Ryba, K. & O'Driscoll, M. (2000). Burnout among New Zealand Primary School Teachers. *New Zealand Journal of Psychology, 29*, 52–60.

Wise, M., & Signal, L. (2000). Health promotion in Australia and New Zealand. *Health Promotion International, 15,* 237–248.

World Health Organization. (1948). *Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19–22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948.*

Wylie, C. (1989). *The impact of tomorrow's schools in primary schools and intermediates: 1989 Survey Report.* New Zealand Council for Educational Research. Wellington: New Zealand.

Wylie, C. (1991). *The impact of tomorrow's schools' in primary schools and intermediates: 1990 Survey Report.* New Zealand Council for Educational Research. Wellington: New Zealand.

Wylie, C. (1992). *The impact of tomorrow's schools in primary schools and intermediates:*

1991 Survey report. Wellington: New Zealand Council for Educational Research.

Yang, X., Ge, B., Hu, T., Chi, Wang, L. (2009). Relationship between quality of life and

occupational stress among teachers. *Public Health, 123,* 750–755.

Appendix A

Demographic Information

Gender   Male   Female

Age   20-29   30-39   40-49   50-59   60+

Ethnicity   NZ/European   Maori   Asian   Polynesian   Other

No. of Years Teaching   1   2-4   5-10   11-15   16-20   21-25   25+

School Decile   1   2   3   4   5   6   7   8   9   10

Number of Hour Worked   0-10   11-20   21-30   31-40   41-50   >50

Appendix B

Short-Form 36 Health Survey

1	In general, would you say your health is:	
	Excellent Very Good Good Fair Poor	1 2 3 4 5
2	Compared to one year ago, how would you rate your health in general now?	
	Much better now than one year ago Somewhat better now than one year ago About the same now as one year ago Somewhat worse now than one year ago Much worse now than one year ago	1 2 3 4 5
3	The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much? (Circle one per line)	

Activity	Yes, limited a lot	Yes, limited a little	No, not limited at all
(A) Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	1	2	3
(B) Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf?	1	2	3
(C) Lifting or carrying groceries	1	2	3
(D)Climbing several flights of stairs	1	2	3
(E)Climbing one flight of stairs	1	2	3
(F)Bending, kneeling, or stooping	1	2	3
(G)Walking more than a mile	1	2	3
(H)Walking several blocks	1	2	3
(I) Walking one block	1	2	3
(J) Bathing or dressing yourself	1	2	3

4	During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health? (Circle one number on each line)		
		Yes	No

Cut down on the amount of time you spent on work or other activities	1	2
Accomplished less than you would like	1	2
Were limited in the kind of work or other activities	1	2
Had difficulty performing the work or other activities (for example, it took extra effort)	1	2

5	During the past 4 weeks, have you had any of the following problems with your work or other regular activities as a result of any emotional problems (such as feeling depressed or anxious)? (Circle one number on each line)		
		Yes	No
Cut down on the amount of time you spent on work or other activities		1	2
Accomplished less than you would like		1	2
Didn't do work or other activities as carefully as usual		1	2

6	During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours, or groups? (Circle one)
Not at all Slightly Moderately Quite a bit Extremely	1 2 3 4 5

7.	How much bodily pain have you had during the past 4 weeks? (Circle one)
None Very mild Mild Moderate Severe Very severe	1 2 3 4 5 6

8	During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)? (Circle one)
Not at all A little bit Moderately Quite a bit Extremely	1 2 3 4 5

9.	These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks – (Circle one number on each line)					
	All of the time	Most of the time	A good bit of the time	Some of the time	A little of the time	None of the time
Did you feel full of pep?	1	2	3	4	5	6

Have you been a very nervous person?	1	2	3	4	5	6
Have you felt so down in the dumps that nothing could cheer you up?	1	2	3	4	5	6
Have you felt calm and peaceful?	1	2	3	4	5	6
Did you have a lot of energy?	1	2	3	4	5	6
Have you felt downhearted and blue?	1	2	3	4	5	6
Did you feel worn out?	1	2	3	4	5	6
Have you been a happy person?	1	2	3	4	5	6
Did you feel tired?	1	2	3	4	5	6

10	During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)? (Circle one)	
All of the time		1
Most of the time		2
Some of the time		3
A little of the time		4
None of the time		5

11	How TRUE or FALSE is each of the following statements for you?(Circle one number on each line)				
	Definitely True	Mostly True	Don't Know	Mostly False	Definitely False
I seem to get sick a little easier than other people	1	2	3	4	5
I am as healthy as anybody I know	1	2	3	4	5
I expect my health to get worse	1	2	3	4	5
My health is excellent	1	2	3	4	5

Appendix C

Perceived Stress Scale

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer each question fairly quickly. That is, don't try to count up the number of times you have felt a particular way, but rather indicate the alternative that seems like a reasonable estimate.

For each question choose from the following alternatives:

0. Never   1. Almost never   2. Sometimes   3. Fairly often   4. Very often

1	In the last month, how often have you been upset because of something that happened unexpectedly?	0	1	2	3	4
2	In the last month, how often have you felt that you were able to control the important things in your life?	0	1	2	3	4
3	In the last month, how often have you felt nervous and "stressed"?	0	1	2	3	4
4	In the last month, how often have you felt confident about your ability to handle your personal problems?	0	1	2	3	4
5	In the last month, how often have you felt that things were going your way?	0	1	2	3	4
6	In the last month, how often have you found that you could not cope with all the things that you had to do?	0	1	2	3	4
7	In the last month, how often have you been able to control irritations in your life?	0	1	2	3	4
8	In the last month, how often have you felt that you were on top of things?	0	1	2	3	4
9	In the last month, how often have you been angered because of things that happened that were outside of your control?	0	1	2	3	4
10	In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	0	1	2	3	4

Appendix D

Question 11 attached to the Perceived Stress Scale:

In general, how stressful do you find being a teacher?

- Not at all stressful
- Mildly stressful
- Moderately stressful
- Very stressful
- Extremely stressful

Appendix E

Occupational Role Questionnaire

1 = rarely or never true
2 = occasionally true
3 = often true
4 = usually true
5 = most of the time

Role Overload

At work I am expected to do too many different tasks in too little time.	1 2 3 4 5
I feel that my job responsibilities are increasing.	1 2 3 4 5
I am expected to perform asks on my job for which I have never been trained	1 2 3 4 5
I have to take work home with me.	1 2 3 4 5
I have the resources I need to get my job done.	1 2 3 4 5
I'm good at my job.	1 2 3 4 5
I work under tight deadlines.	1 2 3 4 5
I wish that I had more time to deal with the demands placed upon me at work.	1 2 3 4 5
My job requires me to work in several equally important areas at once.	1 2 3 4 5
I am expected to do more work that is reasonable.	1 2 3 4 5

Role Responsibility

I deal with more people during the day than I prefer.	1 2 3 4 5
I spend time concerned with the problems others at work bring to me.	1 2 3 4 5
I am responsible for the welfare of subordinates.	1 2 3 4 5
People on the job look to me for leadership.	1 2 3 4 5
I have on the job responsibility for the activities of others.	1 2 3 4 5
I worry about whether the people who work for/with me will get things done properly.	1 2 3 4 5
My job requires me to make important decisions.	1 2 3 4 5
If I make a mistake in my work, the consequences for others can be pretty bad.	1 2 3 4 5
I worry about meeting my job responsibilities.	1 2 3 4 5
I like the people I work with.	1 2 3 4 5

Appendix F

Teacher Efficacy Scale (Short Form)

A number of statements about organizations, people, and teaching are presented below. The purpose is to gather information regarding the actual attitudes of educators concerning these statements. There are no correct or incorrect answers. We are interested only in your frank opinions.

INSTRUCTIONS: Please indicate your personal opinion about each statement by circling the appropriate response at the right of each statement.

KEY:
1=Strongly Agree
2=Moderately Agree
3=Agree slightly more than disagree
4=Disagree slightly more than agree
5=Moderately Disagree
6=Strongly Disagree

1. The amount a student can learn is primarily related to family background.	1 2 3 4 5 6
2. If students aren't disciplined at home, they aren't likely to accept any discipline.	1 2 3 4 5 6
3. When I really try, I can get through to most difficult students.	1 2 3 4 5 6
4. A teacher is very limited in what he/she can achieve because a student's home environment is a large influence on his/her achievement.	1 2 3 4 5 6
5. If parents would do more for their children, I could do more.	1 2 3 4 5 6
6. If a student did not remember information I gave in a previous lesson, I would know how to increase his/her retention in the next lesson.	1 2 3 4 5 6
7. If a student in my class becomes disruptive and noisy, I feel assured that I know some techniques to redirect him/her quickly.	1 2 3 4 5 6
8. If one of my students couldn't do a class assignment, I would be able to accurately assess whether the assignment was at the correct level of difficulty.	1 2 3 4 5 6
9. If I really try hard, I can get through to even the most difficult or unmotivated students.	1 2 3 4 5 6
10. When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment.	1 2 3 4 5 6

Appendix G

Copy of an Email Sent to School Principal's Personal Assistant

Hi (Principals Personal Assistant)

I'm Jay, a Masters of Educational Psychology student at Massey University. I'm carrying out a study on teacher wellbeing in which I'm looking for teachers to participate in. Some brief facts about the study are as follows:
- 100% anonymous.
- Is done online.
- Takes no more than 10 minutes to complete.

I would like to seek approval from the principal for teachers to participate. I felt it would be appropriate to go through yourself first. If the principal agrees, all he/she has to do is give the OK and either yourself or the principal fill out the attached consent form and email it back. From there, it's a matter of emailing the attached information sheet to potential participants.

I know schools get approached all the time for this stuff, my approach is intended to make it as simple and as less time consuming as possible.

I would really appreciate   College's support. Thanks for your help, if you have any questions, please do not hesitate to contact me.

- Show quoted text -

2 attachments — Download all attachments

InformationSheet.pdf
56K   View   Download

Principal Consent Form.doc
70K   View   Download

Reply Forward

Massey University
College of Education
Centennial Drive
Palmerston North
NEW ZEALAND

Massey University
COLLEGE OF EDUCATION
Te Kupenga o Te Mātauranga

Appendix H

The Wellbeing of New Zealand Teachers: The Relationship between Health, Stress, Job Demands, and Teacher Efficacy.

SCHOOL PRINCIPAL/ON BEHALF OF SCHOOL PRINCIPAL CONSENT FORM

I have read the Information Sheet and understand the details of the study. My questions (if any) have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree to allow my staff to participate in this study under the conditions set out in the information sheet.

Date:

Signature:
Please type your name

If emailing back.

Full Name - printed

School

Massey University
College of Education
Centennial Drive
Palmerston North
NEW ZEALAND

Massey University
COLLEGE OF EDUCATION
Te Kupenga o Te Mātauranga

Appendix I

The Wellbeing of New Zealand Teachers: The Relationship between Health, Stress, Job Demands, and Teacher Efficacy.

Information Sheet for Participants

Introduction: I'm Jay Beckley – Masters of Educational Psychology student at Massey University. I'm supervised by Dr. Jane Prochnow from the School of Education in Palmerston North. Over the last 30 years there has been a substantial amount of literature demonstrating the effects and consequences of stress and burnout on teachers. Whilst there is evidence that suggests chronic stress leads to mental and physical illnesses (Dougall & Baum, 2001; and Schneiderman, Ironson, & Siegel, 2005), investigations on whether underlying or prevalent mental and physical health conditions are as common as stress in teachers are rare. Thus, little attention has focused on teachers' global health (physical and mental) with and without the influence of stress. However, Boyle, Borg, Falzon, & Baglioni (1995) suggest that workload (teacher role) and student disruptive behaviour (teacher efficacy) are the two leading factors which contribute to teacher stress. Therefore, my research will examine all four factors to determine the extent of the relationship between teacher stress, health, teacher role, and teacher efficacy.

What is involved if you agree to participate? If you agree to participate in this study you will be invited to complete four anonymous surveys all taking no more than 20 minutes to complete. All you have to do is tick the appropriate answer. The surveys will ask about your health, stress, role, and classroom management.

Risk: This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher named above is responsible for the ethical conduct of this research. If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher, please contact Professor John O'Neill, Director, Research Ethics, telephone 06 350 5249, email humanethics@massey.ac.nz".

Privacy, Confidentiality and Data Management: This study is completely anonymous. You will not be required to disclose your name, school, or any other information that could identify you. The surveys on surveymonkey.com are 100% secure. All information will be stored there in which only the researcher has access to. Results of this study may be published in a peer reviewed journal in which the same anonymity conditions will apply.

Benefits: This is considered the first large scale study of its type that examines the health status of teachers. Whilst there are no direct benefits to you other than what you learn from answering the questions and knowing that you are helping research, you will be making a significant contribution to determining if teachers are in need of increased support when faced with physical and mental health and stress problems.

Participant Rights: Your participation in this study is voluntary. You can discontinue the survey at any time. You may also skip questions that you do not wish to answer. You can at any stage opt out of the surveys and your result will not be recorded. You are also more than welcome to contact me to ask any questions related to the study. At your request, you will be sent a summary of findings. By proceeding to the survey, implies consent to proceed.

Contact Information: Any questions about this study can be directed to Jay Beckley via email, jaybeckley@gmail.com or phone 021 1545 333. To participate, please go to:
https://www.surveymonkey.com/s/teacherwellbeingstudy