

Title	Investigation of stress and burnout in Irish second-level teachers: A mixed-methods approach.
Authors	Foley, Conor
Publication date	2013
Original Citation	Foley, C. 2013. Investigation of stress and burnout in Irish second-level teachers: A mixed-methods approach. PhD Thesis, University College Cork.
Type of publication	Doctoral thesis
Rights	© 2013, Conor Foley - <a href="http://creativecommons.org/licenses/by-nc-nd/3.0/">http://creativecommons.org/licenses/by-nc-nd/3.0/</a>
Download date	2025-01-30 02:43:16
Item downloaded from	<a href="https://hdl.handle.net/10468/1426">https://hdl.handle.net/10468/1426</a>



*Investigation of stress and burnout in Irish second-level teachers: A mixed-methods approach.*

**Conor Foley**

Thesis submitted to fulfil requirements for the degree of Doctor of Philosophy at National,  
University of Ireland, Cork.

Under the supervision of Dr. Mike Murphy

School of Applied Psychology

Head of School: Professor John McCarthy

Submitted October 2013

## **Acknowledgements**

I would like to thank Dr. Mike Murphy for your patience, expertise and guidance.

To my parents and brothers for your limitless care, support and understanding,  
without which I would never have completed this project.

To Niamh for your love, support and encouragement to make the best of myself.

## **Declaration**

I hereby declare that this PhD thesis is a presentation of my original research work and has not been submitted for another degree, either at University College Cork or elsewhere.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

Conor Foley

## **Abstract**

This study explores the experiences of stress and burnout in Irish second level teachers and examines the contribution of a number of individual, environmental and health factors in burnout development. As no such study has previously been carried out with this sample, a mixed-methods approach was adopted in order to comprehensively investigate the subject matter. Teaching has consistently been identified as a particularly stressful occupation and research investigating its development is of great importance in developing measures to address the problem. The first phase of study involved the use of focus groups conducted with a total of 20 second-level teachers from 11 different schools in the greater Cork city area. Findings suggest that teachers experience a variety of stressors – in class, in the staff room and outside of school.

The second phase of study employed a survey to examine the factors associated with burnout. Analysis of 192 responses suggested that burnout results from a combination of demographic, personality, environmental and coping factors. Burnout was also found to be associated with a number of physical symptoms, particularly trouble sleeping and fatigue. Findings suggest that interventions designed to reduce burnout must reflect the complexity of the problem and its development. Based on the research findings, interventions that combine individual and organisational approaches should provide the optimal chance of effectively tackling burnout.

## **Table of Contents**

<b>Acknowledgments</b>	<b>i</b>
<b>Declaration</b>	<b>ii</b>
<b>Abstract</b>	<b>iii</b>
<b>1. Stress, Burnout and Teaching</b>	<b>1</b>
1.1 Literature Review Strategy	6
<b>2. Burnout</b>	<b>7</b>
2.1 Emergence of Burnout	8
2.2 Definition and Measurement of Burnout	10
2.3 Models of Burnout Development	16
2.4 Burnout Interventions	22
2.5 Summary of Burnout Literature	26
<b>3. Individual Differences</b>	<b>29</b>
3.1 Personality and Burnout	30
3.2 Core Self-Evaluations	34
3.3 Self-Efficacy	40
3.4 Summary of Individual Differences Literature	46
<b>4. Work Environment</b>	<b>49</b>
4.1 School and Classroom Environments	50
4.2 Summary of Work Environment Literature	61

<b>5. Coping</b>	<b>63</b>
5.1 Coping Strategies	64
5.2 Teacher Coping Resources and Strategies	72
5.3 Summary of Coping Literature	75
<b>6. Demographic Factors</b>	<b>77</b>
6.1 Age and Burnout	77
6.2 Gender and Burnout	79
6.3 Summary of Demographic Factors	81
<b>7. Burnout and Health</b>	<b>83</b>
7.1 Job Stressors and Physical Symptoms	84
7.2 Personality and Health	86
7.3 Burnout and Health in Teachers	87
7.4 Summary of Burnout and Health Literature	89
<b>8. Summary of Literature and Hypotheses</b>	<b>90</b>
8.1 Individual Differences	90
8.2 Work Environment	91
8.3 Coping	92
8.4 Demographic Factors	93
<b>9. Focus Group Methodology</b>	<b>94</b>
9.1 Focus Groups	94
<b>10. Design</b>	<b>97</b>
10.1 Participants	97
10.2 Ethics	98
10.3 Interview Schedule	99

10.4 Procedure	99
10.5 Approach to Analysis	100
<b>11. Focus Group Results</b>	<b>103</b>
11.1 Summary and Implications of Findings	157
<b>12. Survey Study Methodology</b>	<b>161</b>
12.1 Cross-Sectional Survey	161
12.2 Sampling	164
<b>13. Method</b>	<b>165</b>
13.1 Sample	165
13.2 Variables and Scales	167
13.3 Procedure	176
13.4 Statistical Analysis	177
<b>14. Ethics</b>	<b>181</b>
14.1 Consent	181
14.2 Deception	182
14.3 Debriefing	182
14.4 Withdrawal	182
14.5 Confidentiality	183
14.6 Protection of Participants	183
<b>15. Survey Results</b>	<b>184</b>
15.1 Descriptive Results	184
15.2 Bivariate Analysis	192
15.3 Multivariate Analysis	209
15.4 Results of Multivariate Analysis by DV	210



<b>16. Discussion</b>	<b>225</b>
16.1 Discussion of Qualitative Study	225
16.2 Discussion of Survey Results by DV	232
16.3 Conclusions and Implications	270
16.4 Limitations	278
16.5 Potential Future Research	281
16.6 Summary	284
<b>17. Conclusion</b>	<b>287</b>

## **1. Stress, Burnout and Teaching**

Understanding and attempting to improve the health and wellbeing of people at work has been an important focus for psychologists for some time (Arnold et al., 2010). One of the core avenues of interest in this domain is stress and burnout and their potentially damaging effects on individuals and organisations. Stress is generally defined as a negative emotional state resulting from an imbalance between the demands placed on an individual and the resources available to them in coping with these demands, while burnout may be described as a “final stage” of exhaustion resulting from chronic and enduring work stress (Schaufeli & Buunk, 2003).

Though there remains some debate as to the exact classification of burnout, it has been defined as a tripartite syndrome manifesting in feelings of emotional exhaustion, depersonalisation and reduced personal accomplishment towards one’s work (Maslach, Jackson & Leiter, 1996). Research has consistently suggested that burnout can lead to a variety of negative outcomes both for individuals affected and the organisations that employ them. As such, job stress and particularly burnout has received a great deal of research attention from those wishing to understand its causes and prevent its negative consequences.

Research in the UK (Johnson et al., 2005), Germany (Kieschke & Schaarschmidt, 2008) and the Netherlands (Schaufeli, Daamen & Van Mierlo, 1994) has identified teaching as a particularly stressful occupation, prone to high levels of

burnout. To date, no comprehensive investigation of teacher burnout has taken place in Ireland, rendering estimates of its prevalence and severity difficult. However, surveys by the Association of Secondary Teachers Ireland (ASTI) and the Health and Safety Authority (HSA) indicate that stress and anxiety are the most common cause of occupational absenteeism among Irish teachers, and a significant factor in teacher retirement (Fitzgerald, 2008). The few studies of second level teacher stress in Ireland that have been carried out have suggested such factors as inadequate school facilities, difficult relations with students and heavy workload may precipitate stress development (Kerr, Breen, Delaney, Kelly & Miller, 2011; Wynne, Clarkin & Dolphin, 1991). While these studies provide useful background information for further investigation, they were small in scale and conducted some time ago.

Stress, and by extension burnout, has been explained as resulting from a 'transaction' between a person and their environment. Lazarus and Folkman's (1984) transactional model emphasises the importance of both the environmental demands an individual is exposed to, and their appraisals of their ability to cope with them. Environmental demands perceived by an individual as threatening their adaptive resources may be referred to as 'stressors'. Research into the causes of teacher burnout has tended to focus both on identifying the stressors experienced by teachers in their work, and also on the personality characteristics and coping resources that may influence their appraisal of these stressors (e.g. Betoret, 2009; Kokkinos, 2007).

Teachers experience a complex work environment involving varied interactions with students, colleagues, principals and parents. There is a wealth of evidence to suggest that a school's psychosocial climate and the quality of relationships within it can be instrumental in influencing the nature and severity of stressors experienced by teachers within it (Grayson & Alvarez, 2008). Teachers with negative perceptions of school-level and classroom-level psychosocial environments tend to report higher levels of each of the three dimensions of burnout than those teachers with a positive view of their work environment (Dorman, 2003).

School-level factors have been identified in the literature to relate to teachers' occupational stress, such as interpersonal demands, lack of professional recognition, role ambiguity and role conflict, bureaucracy, lack of support, workload, time pressure, lack of involvement in decision-making and lack of resources provided (Betoret, 2009; Pithers & Fogarty, 1995; Travers & Cooper, 1996). Numerous classroom-specific stressors have also been highlighted. For example, disciplinary problems in class and the presence of disruptive students have consistently been found to correlate positively with several burnout dimensions, presenting a serious demand on teachers and a threat to their wellbeing (Hakanen, Bakker & Schaufeli, 2006; Kokkinos, 2007). Teachers who believe they have a well-controlled, positive and interactive environment in their classrooms tend to have lower levels of burnout than teachers without this positive view (Brouwers & Tomic, 2000).

In terms of personality characteristics, research suggests that those teachers who are emotionally stable, outgoing, enthusiastic and confident in their abilities are more likely to perceive their environment more positively and are less likely to experience burnout (Cano-Garcia, Padilla-Munoz, & Carrasco-Ortiz, 2005; Kokkinos, 2007; Skaalvik & Skaalvik, 2007). The personality trait of neuroticism has repeatedly been found to correlate strongly with the dimensions of burnout (Schaufeli & Enzmann, 1998). Findings in relation to other personality traits and individual-level factors such as sex, age, etc. have been mixed and further investigation is required in order to gain a clearer understanding of how they relate to the dimensions of burnout.

International research on the experiences of teachers has helped create clear understanding of burnout and important factors that can contribute to, or protect against, its development. However, every education system is different and conditions experienced by teachers vary depending on where they are located. At the time of writing, teachers in Ireland are faced with pay cuts and reductions in other resources, as well with increased working hours and changes in working conditions. These changes follow similar measures introduced in 2010 in an attempt to reduce public expenditure on education. It appears likely that increased demands and reduced resources will lead to greater stress being placed upon Irish teachers resulting in a rise in levels of burnout and other negative consequences associated with it. A report by the Mental Health Commission (MHC, 2011) has underlined concerns about the negative impact of the economic recession in Ireland on the mental health of workers and associated costs to employers.

It is thus of great importance that the unique challenges facing Irish teachers are investigated and understood. In order to comprehensively investigate burnout in Irish second level teachers, both qualitative and quantitative data on the experience of teachers were gathered and analysed. Focus groups were conducted in order to examine the day to day experiences of teachers and to aid in the selection of instruments to be used in the later survey phase. Qualitative data was also useful in interpreting the results of statistical analysis of survey data.

This thesis will firstly outline the literature in relation to burnout and the various factors relevant to its development. Subsequently the details of the focus group study and its findings will be presented, followed by the methodology and results of analysis of survey data. The document will conclude with discussion of findings of both studies and their relation to each other and the literature. Conclusions, implications and limitations will be presents and discussed in turn.

### **1.1 Literature Review Strategy**

In order to identify relevant literature, an extensive search of a number of databases was conducted. Databases such as PsycINFO, PsychLIT, Social Sciences Citation Index and Google Scholar were explored using a wide range of search terms such as *burnout*, *personality*, *work environment*, *teacher stress*, *coping*, *burnout and health*, *burnout in Ireland*, and a number of other combinations of these and other relevant terms. In addition, seminal articles such as Schaufeli and Buunk (2003), Lee and Ashforth (1996) and a number of review articles were consulted in an attempt to ensure comprehensive coverage of relevant material.

The literature search yielded approximately 600 abstracts which were reviewed and their relevance to the current research determined whether or not they were retained and subsequently included in the final literature review. The final review includes approximately 200 references taken from books, journal articles and reports. All articles included were published in English and had been subject to peer-review prior to publication. Both qualitative and quantitative papers were considered and included in the final review.

## **2. Burnout**

As discussed previously, burnout is described as a work-related syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment resulting from long-term occupational stress (Maslach, Jackson & Leiter, 1996). A number of negative implications of burnout have been identified, ranging from mental and physical health problems to reduced productivity and financial costs for employers. The concept of job burnout emerged in the 1970s, at a time when interest in the experiences of people at work and the potential difficulties that could arise was growing (Schaufeli & Buunk, 2003). Since that time, our understanding of burnout, its development and consequences has greatly expanded.

This chapter will explore the emergence of burnout as a concept and how it is currently conceptualised and measured. Debate exists regarding the precise definition and measurement of the burnout construct and a summary of the influential viewpoints in this on-going discussion will be presented. An overview of several prominent explanatory models of burnout development will be presented and their contributions to our knowledge will be discussed in detail. The chapter will conclude with a summary of the various issues highlighted, and discussion of their implications for the current investigation of burnout in teachers.



## **2.1 Emergence of Burnout**

Two key figures were responsible for identifying and describing the work-related exhaustion syndrome that would later become known as burnout. The metaphor of a flame 'burning out' was first used by Herbert Freudenberger (1974) to describe the gradual depletion in energy and motivation exhibited by his colleagues in a free drug-treatment clinic in New York (Schaufeli, Leiter & Maslach, 2009). At roughly the same time Christina Maslach (1976), a social psychology researcher, described encountering similar cases of work-related exhaustion amongst a variety of human services or 'people workers' in California. It was initially believed that burnout was a syndrome specific to human services workers but the definition was gradually expanded to include all occupational types.

The first phase of research into the newly defined phenomenon involved specifying what exactly burnout was, how it could be measured, and the development of interventions to treat it (Maslach, Schaufeli & Leiter, 2001). Early research tended to be descriptive and qualitative in nature, involving case studies, interviews and observations of people at work. This process helped identify common themes in the experience of burnout and facilitated precise definition of the phenomenon and its dynamic nature. Emotional exhaustion towards their work, development of cynical, negative attitudes towards clients, and a tendency to evaluate themselves negatively were found to be common issues experienced by 'burned out' individuals (Maslach & Jackson, 1981).

Burnout is conceptualised as a dynamic process, whereby its dimensions influence and feed into each other. Emotional exhaustion has been described by

Maslach as the “central quality of burnout”, as it reflects the stress dimension of burnout (Maslach et al., 2001). The experience of emotional exhaustion prompts individuals to attempt to distance themselves emotionally and cognitively from their work (depersonalisation). Chronic work-related exhaustion and accompanying disengagement erode one’s sense of effectiveness at work, resulting in reduced personal accomplishment. It has been suggested that personal accomplishment may develop either alongside emotional exhaustion and depersonalisation (Leiter, 1993), or sequentially due to a gradual erosion of one’s sense of effectiveness caused by the other two burnout dimensions (Maslach et al.)

These three dimensions of ‘emotional exhaustion’, ‘depersonalisation’ and ‘reduced personal accomplishment’ formed the basis of a new instrument to measure burnout – the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981). As the MBI is a short and easily-administered instrument, it quickly became the most widely used inventory for assessing burnout, a position it continues to occupy (Schaufeli & Buunk, 2003). From the early 1980s onwards interest in burnout began to expand beyond the USA and a narrow focus on human service workers. As the number of papers investigating burnout grew, understanding of the phenomenon and its development improved. Several explanatory theoretical models have also been advanced in order to coherently explain burnout development (Bakker & Demerouti, 2007). Nevertheless, debate continues regarding the definition, measurement and development of burnout and alternative conceptualisations to the dominant Maslach model have been advanced. The following sections will explore these issues in detail.

## **2.2 Definition and Measurement of Burnout**

Freudenberger's (1974) early definition of burnout consisted simply of a list of related symptoms. This approach was eventually deemed to be unsatisfactory as it failed to account for the dynamic aspect of the syndrome (Schaufeli & Buunk, 2003). Numerous alternative definitions have been advanced and debated since the 1970s and consensus on the exact nature and measurement of burnout has not yet been reached. Nevertheless, there is agreement on some of the core characteristics of burnout, most notably the exhaustion and depersonalisation/cynicism components.

### ***2.2.1 Maslach's Definition***

As noted previously, the three component definition proposed by Maslach and Jackson (1981) remains the most prevalent in burnout research, likely in part due to the ease of use of the accompanying Maslach Burnout Inventory. This self-report questionnaire originally focused only on those who worked in human services occupations, in line with the original view that burnout resulted from problematic relationships with patients, students, etc. at work. More recent versions of the MBI have reflected the view that burnout can affect those from all occupational types and its psychometric properties have been found to be satisfactory across occupations in a variety of studies. For example, Leiter and Schaufeli (1996) found support for the 3 factor structure of the MBI across occupational types (managers, clerical workers, nurses, etc.) among 3,312 workers in a Canadian health care

facility. Studies conducted using the MBI with police (Kop, Euwema & Schaufeli, 1999; N = 358), forestry workers (Schutte, Topinnen, Kalimo & Schaufeli, 2002; N = 9,055) have also supported the psychometric properties and factor structures of the MBI instruments.

Cross-cultural studies have also consistently supported the psychometric properties of the MBI, including the 3-factor structure, even across language translations. A review of such studies by Hwang, Scherer & Ainina (2003) examined the factor structure of the MBI in a range of countries across the world. Of the 35 articles reviewed, over 90% identified a three factor structure in line with those of the MBI. Kokkinos (2006) assessed the psychometric properties of the Greek translation of the MBI Educators Survey with a sample of 771 Greek Cypriot teachers. Findings of the study supported the 3-factor structure over alternative models as well as the reliability of the three scales. A more recent large-scale study (1,661 participants) conducted among teachers in Syria and Germany also supported the psychometric properties of the MBI, with satisfactory internal consistency and test-retest reliability over the course of 1 year (Schwarzer & Hallum, 2008).

### ***2.2.2 Criticisms***

A variety of alternative definitions have been put forward for burnout, with some suggesting a broader definition than Maslach's and others advocating a more narrow conceptualization. Early criticisms of Maslach's definition often focused on

its narrow focus on human services workers, with some researchers arguing that burnout could potentially affect those from all occupational groups (e.g. Pines & Aronson, 1988). Much of the more recent debate around the definition and measurement of burnout derives from concerns regarding the conceptualization and measurement of burnout, particularly in relation to the role of the personal accomplishment dimension (Halbesleben & Buckley, 2004). Clinicians have also expressed concerns around the scientific basis of burnout, the lack of clear criteria by which it might be diagnosed and classified, and how it should be treated (e.g. Kaschka, Korczak & Broich, 2011).

### ***2.2.3 Alternatives to the Maslach Model of Burnout***

While Maslach's model of burnout and the MBI remain extremely popular among burnout researchers, they have each been subject to criticisms by those who believe they do not accurately reflect the true experience of burnout. As a result, several alternative conceptualisations and measures have been proposed in order to address the perceived shortcomings of Maslach's model. Much debate centres on the role of the personal accomplishment dimension within the burnout syndrome. It has been argued that emotional exhaustion and depersonalisation constitute the 'core' of burnout with reduced personal accomplishment only a loosely related construct (Bakker, Demerouti & Verbeke, 2004). As a result, some researchers have simply dropped the personal accomplishment dimension of the MBI in their research (e.g. Skaalvik & Skaalvik, 2010). Others have taken a more

radical approach and have created alternative burnout assessment instruments to reflect their alternative definitions of burnout.

One such instrument is the Oldenburg Burnout Inventory (OLBI; Demerouti, 1999). The OLBI is based on a similar model to the MBI but only assesses two dimensions, 'exhaustion' and 'disengagement from work'. Each scale features positively and negatively worded questions, in contrast to the MBI where all items are positively worded. Furthermore, while the MBI focuses purely on the affective components of emotional exhaustion, the OLBI includes questions on the cognitive and physical experiences of burnout (Demerouti, Bakker, Nachreiner & Schaufeli, 2001). Investigations of the psychometric properties of the OLBI have found satisfactory indicators of its reliability and validity (Halbesleben & Demerouti, 2005). Schaufeli and Taris (2005) suggest that OLBI is a useful alternative to the MBI as it does not include unacceptable questions, is freely available, and its convergent validity with the MBI has been demonstrated. As yet, it appears that most studies continue to use the MBI, and it remains to be seen whether the OLBI can become a widely-used instrument.

Some researchers have developed single-dimension measures of burnout. For example, Pines and Aronson (1988), created the Burnout Measure (BM). The BM includes items on physical, emotional and mental exhaustion that may be summed up to a single composite burnout score. It also conceptualises burnout as a being general state of exhaustion, not necessarily related only to work. The BM's reliability and validity as a measure of exhaustion are reasonably well established

and it has gained some popularity among researchers as a measure of burnout (Schaufeli & Buunk, 2003).

A more recent single-dimension measure is the Copenhagen Burnout Inventory (CBI; Kristensen, Borritz, Villadsen & Christensen, 2005). In line with Pines and Aronson (1988) burnout is not viewed solely as a work-related issue, but instead as general fatigue and exhaustion. While support has been provided for the psychometric properties of the CBI by a number of studies (e.g. Milfont, Denny, Ameratunga, Robinson & Merry, 2008), it has also been subject to criticism for blurring the lines between burnout and fatigue. Schaufeli and Taris (2005) argue that reducing burnout to a single, general exhaustion/fatigue dimension essentially makes it redundant as a concept and fails to account for the exhaustion *and* withdrawal experienced by those suffering from job burnout.

Evidently, doubt remains regarding the precise definition and measurement of burnout. Shirom (2005) in his review of the study of burnout suggests that more effort needs to be made to clearly define the concept of burnout and differentiate it from similar but distinct concepts such as depression and chronic fatigue syndrome. Similar concerns have also been voiced by clinical practitioners and these will be outlined below.

#### ***2.2.4 Burnout as a Medical Diagnosis***

While burnout exists as an established medical diagnosis in some countries (e.g. Sweden and The Netherlands), concern has been expressed about the lack of a

standardized, internationally accepted and valid procedure for the diagnosis of burnout by clinicians (Korczak, Huber & Kister, 2010). There is no mention of burnout in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000) and it is very briefly listed as a “state of vital exhaustion” in the International Classification of Diseases (ICD-10; World Health Organisation, 1992). It has been suggested that the lack of clarity in diagnosing burnout has allowed employees to abuse burnout as an easy excuse for a “sick note” from work (Kaschka et al., 2011).

As existing burnout measures such as the MBI use continuous subscales, efforts have been made to identify “cut-off points” to facilitate categorisation of individual scores on the subscales (Schaufeli et al., 2009). Statistical cut-off points have been developed to denote low, average and high scores on the three subscales based on the upper, middle and lower thirds of the score distribution as recommended by the MBI test manual (Maslach et al., 1996). However, these scores have not been validated against external criteria. For example, a “high” emotional exhaustion score may not necessarily equate to feelings of distress, health disorders or poor performance (Schaufeli et al., 2001).

As noted earlier, Sweden and The Netherlands have each established national guidelines for the clinical measurement and diagnosis of burnout. The Swedish version of ICD-10 (Swedish National Board of Health and Welfare, 2005) includes an expanded definition of burnout, referred to as the “exhaustion disorder” which includes symptoms similar to the dimensions specified by the MBI, as well as a number of related physical and psychological disturbances. These



symptoms have to occur every day during a two-week period and must cause significant suffering with impaired work capacity. Finally the symptoms must not be related to other psychiatric diagnosis, substance abuse, or medical diagnosis (Schaufeli et al., 2009). The Dutch approach is quite similar, with burnout characterised as an “end-stage” of a broader spectrum of stress-related disorders (Van der Klink & van Dijk, 2003).

It is evident that there is a difference between psychologists’ conception of burnout and that of medical practitioners. Opinions differ regarding the importance of establishing clear clinical cut-off points for burnout and this debate is likely to continue for the foreseeable future as there does not appear to be any intention of including the syndrome in either ICD-11 or DSM-V (Kaschka et al., 2011). While this lack of medical recognition and clarity has been seen as a weakness by some practitioners, it has been argued that this has in fact aided its popularity as a concept. Shirom (1989) suggests the non-medical and socially acceptable label of burnout carries little social stigma compared to other psychiatric diagnoses.

### **2.3 Models of Burnout Development:**

In the early years of burnout research a variety of contributory factors and consequences of the syndrome were identified. However, there remained a lack of a clear theoretical framework for burnout. It has in fact been argued that one coherent and generally accepted theory of burnout may never be established, such is the complexity of the phenomenon (Schaufeli & Buunk, 2003). Nevertheless, in

the last three decades attempts have been made to develop and test several models of burnout.

In general, models of stress and burnout development can be split into two categories – structural approaches or transactional approaches (Arnold et al., 2010). Structural approaches tend to focus on work environment factors that can affect employee wellbeing. Transactional models tend to be more complex than structural models as they take into account the role of individual differences, appraisal and coping in the experience of stress. In effect, transactional models take an individual's personal variables as well as job-related stressors into consideration when attempting to explain the burnout phenomenon (Betoret, 2009).

Both structural and transactional models are widely used in burnout research today, and each offers some contribution to our understanding of burnout. Structural models generally tend to be relatively simple and clear-cut in their predictions regarding the impact of work factors on wellbeing. These models tend to be highly testable and generalisable across occupations, however some of the specific predictions offered have not always been supported by research evidence and these will be discussed presently. The focus of structural models on the role of environmental factors in burnout has helped clearly identify important stressors present in many workplaces (e.g. issues with role clarity, empowerment, etc.)

Transactional models have given us a more complete account of the stress development process but due to their complexity are not always easy to test and validate. The key contribution of transactional models has been to highlight the

importance of individual differences in responding to stressors in the workplace and influencing the coping process. A summary of several influential models and their contributions to our understanding of burnout are presented below.

### ***2.3.1 The Demand-Control Model***

One of the most influential structural models is the Demand-Control Model (DCM; Karasek, 1979). This model proposes that job strain and burnout is particularly caused by a combination of high job demands (e.g. work overload, time pressure) and low job control – an employee’s potential control over their tasks and conduct during their working day (Karasek, 1979). This implies that those with a level of autonomy in meeting job demands are less likely to experience job strain and burnout. The combination of high job demands and low control has been found to be an important predictor of psychological strain and illness (Schnall, Landsbergis & Baker, 1994).

However, empirical support has been mixed for the idea that job control can act as a buffer between demands and wellbeing, implying that job control may only partially moderate the negative effects of high demands on wellbeing (Hausser, Mojzisch, Niesel & Schulz-Hardt, 2010). Furthermore, the extent to which autonomy is desirable varies according to occupation, e.g. air-traffic controllers require a structured and controlled workplace whereas teachers may favour having freedom to deliver the curriculum as they see fit. Nevertheless, the DCM has been a

very influential model in empirical research on job stress and wellbeing over the last thirty years.

### ***2.3.2 Job Demand-Resources Model***

The Job Demands-Resources Model (JD-R; Demerouti et al., 2001) proposes that burnout is a product of two categories of work characteristic. Job demands are those aspects of the job that require effort (e.g. work pressure), and as a result are associated with psychological costs (such as burnout). Job resources are job characteristics that assist in achieving work goals, diminish job demands, or lead to personal growth. Examples of job resources include career opportunities, colleague support, autonomy and positive climate. In contrast to the DCM, the JD-R model doesn't focus on the interaction between demands and resources; instead it considers the additive main effects of demands and resources in predicting burnout (Halbesleben & Buckley, 2004).

Job demands are seen to exhaust employees' mental and physical resources, leading to depletion of energy and eventually health problems (Demerouti et al., 2001). Job demands lead people to employ performance-protection strategies (Hockey, 1993). Performance protection is achieved through physiological reactions and/or greater psychological effort. This process of performance protection may mask drops in work performance but has its own costs, eventually in some cases leading to exhaustion and burnout. Job resources are also important, as the presence of such resources leads to engagement,

whereas their absence leads to a cynical attitude towards work (Demerouti et al., 2001).

The JD-R model has found popularity due to the fact that it attempts to explain both positive and negative work-related outcomes (engagement and burnout). However, as it largely focuses on work-environment factors, it has been argued that the model fails to account for the important role of individual difference factors such as personality traits, self-efficacy, etc. in burnout development (Fernet, Guay, Senecal & Austin, 2012). Some efforts have been made to integrate personal resources into the model (e.g. Xanthoupolou et al., 2007) but more work is required to clarify the role of personal characteristics alongside job demands and resources in predicting burnout and engagement.

### ***2.3.3 Transactional Models***

Transactional models of burnout development view the stress process as a dynamic transaction between a person and their work environment (Lazarus & Folkman, 1984). These models explore how people at work react and respond to their work environment and the challenges it presents (Arnold et al., 2010). The psychological mechanisms of the stress process are described in detail by transactional models. These mechanisms include individuals' cognitive evaluation of their work environment, emotional responses to work and decision-making in relation to coping (Arnold et al., 2010). Transactional models are generally more complex than structural models as they take into account the role of personality traits and other

individual difference factors in influencing how individuals view their work environment.

Perhaps the most influential transactional model of stress and burnout was proposed by Lazarus and Folkman (1984). This model focuses on the importance of understanding each facet of the stress process from the environmental and personal antecedents, the intervening processes such as coping, the indicators of the stress response and finally the longer-term consequences for individuals and the workplace. Understanding and describing the environmental demands placed on individuals is just the beginning, the role of the person and their unique characteristics is of great importance in determining stress outcomes according to this model. In sum, it is not simply the work demands placed on an individual that determines whether they will become burned out, their *appraisals* of these demands is also of crucial importance.

Primary appraisals relate to an individual's evaluation of the extent to which a situation poses a threat to them. These are followed by secondary appraisals, where the individual evaluates whether they can cope with the situation. If the individual believes they can cope with a situation they are less likely to appraise it as a threat and more likely to appraise it as a challenge (Arnold et al., 2010). Together, these primary and secondary appraisals influence what a person chooses to do in response to the situation.

Appraisals are linked to a person's emotional response to situations and in turn their physiological responses. When threat appraisals occur, there are likely to be negative outcomes for the individual affected (e.g. anxiety). In contrast,

challenge appraisals tend to be associated with more positive outcomes and emotions. Personality traits have been found to be important in appraisal, as they predispose people to view events in a way that can either enhance or impair the coping process and its psychological and physical health outcomes (Kaplan, 1996). Since individual appraisals of situations can vary greatly, a wide variety of working conditions may be considered stressful – a situation appraised as a threat by one employee may be seen as a challenge by another (Cox, 1993).

## **2.4 Burnout Interventions**

The cost of employee burnout, both personal and organisational, can be considerable and it is thus unsurprising that many organisations incorporate programs designed to assist their employees in dealing with workplace stress. The extensive information gathered on the course of burnout development and influential factors in its progression have enabled the creation of a range of interventions designed to prevent excessive stress from impacting on individual employees. In general, intervention programs are either person-directed (aimed at individuals/groups), organisation-directed, or a combination of both approaches (Awa, Plaumann & Walter, 2010). While attempts have been made to develop effective interventions from the outset of burnout research, progress has been sporadic and consensus on the best approach has proven evasive (Schaufeli & Buunk, 2003). A recent paper by Maslach, Leiter and Jackson (2012) has called for greater collaboration between researchers and practitioners in order to develop a cohesive approach to interventions.

In spite of the problems outlined above, numerous intervention studies have been published in the past three decades, with a number specifically dedicated to teacher burnout. The publication of meta-analyses of these studies and their effectiveness in counteracting burnout development (e.g. Awa et al., 2010) offers some hope that a more unified field of inquiry can be established, facilitating the best possible chance for the development of effective burnout intervention measures. Awa and colleagues' meta-analysis examined 25 intervention studies carried out primarily in Europe and North America amongst a wide range of occupations including dentists, social workers and police officers amongst others.

The authors compared the effectiveness of person-directed, organisation-directed and combined approaches to intervention. Person-directed interventions involved a variety of methods including relaxation techniques, cognitive-behavioural training, etc., while organisation-directed approaches included work process restructuring, shift adjustments and other measures. Even though a number of the person-directed and organisation-directed approaches showed long-term improvements in burnout, it was found that combined approaches were the most effective over time. In general, those interventions that included follow-up refresher courses were more effective than once-off interventions. While many of the interventions in the meta-analysis were found to be effective, the authors noted that many studies were small in scale, had high dropout rates and failed to adequately report effect sizes.



Several intervention studies have attempted to reduce stress and burnout in teachers with some success. An experimental study of 30 teachers in Utah aimed to reduce stress in a sample of middle and high school teachers identified as being highly stressed in comparison to their colleagues (Bertoch, Nielson, Curley & Borg, 1989). The experimental group took part in 12 sessions delivered by clinical psychologists educating them on the development of stress, meditation and coping strategies, as well as a variety of beneficial general health practices. It was found that the experimental groups reported significantly lower levels of stress on a range of variables in comparison to the control group.

A more recent study assessed the potential impact of meditation on teacher stress and burnout 91 American teachers (Anderson, Levinson, Barker & Kiewra, 1999). Participants in the experimental group were instructed on the use of meditation and encouraged to practice it twice daily at home and at school for five weeks. In addition participants met with their group leader for a 90 minute class each week and a follow-up session was held one month after the final class. Significant differences for all dimensions of burnout were found between the experimental and control group when tested immediately after the conclusion of the intervention and one month later at the follow-up. Specifically amongst the experimental group, significant reductions in emotional exhaustion and depersonalisation were found at the follow-up when compared to the immediate post-testing. No significant difference in personal accomplishment was found between post-test and follow-up.

While these studies have shown promise it is important to note their small sample sizes, potential self-selection bias among participants who may be particularly open to participating in certain types of intervention and finally, the lack of a placebo control group. What is clear from the numerous studies and reviews of workplace interventions is that burnout can be effectively reduced with the correct measures. However, a number of the problems highlighted a decade ago remain, with studies often suffering from methodological inadequacies (Halbesleben & Buckley, 2004). The meta-analysis of Awa and colleagues (2010) however is a step in the right direction towards developing an established set of procedures for interventions that effectively reduce burnout. A key first step in the development of such measures is gaining understanding of the circumstances that require change, necessitating the type of exploratory work being undertaken in the current study. The knowledge gained from the current investigation could potentially inform future interventions designed to tackle burnout among Irish teachers.

## **2.5 Summary of Burnout Literature**

Burnout as a concept emerged at a time when interest in work-related wellbeing was in its infancy. In the four decades since it was first conceptualised our understanding of the nature of burnout, its causes and consequences has developed and expanded greatly. However, as the concept of burnout grew in popularity so too did discussion and disagreement regarding its exact definition, measurement and development. In addition, while a number of promising measures to reduce the impact of burnout on individuals have been developed, consensus on the most effective approaches to intervention remains elusive.

Maslach's conceptualisation of burnout as a tripartite syndrome and the accompanying Maslach Burnout Inventory has effectively taken a position of dominance in burnout research, with the MBI considered the 'gold standard' burnout assessment (Schaufeli et al., 2009). Maslach's definition has been criticised for being too narrow by some and too broad by others. The lack of a medically recognised diagnosis and assessment procedure in particular has drawn complaint from clinical practitioners. While debates on these issues remain, it has been evident in the past that there is a willingness on the part of the burnout 'establishment' to adopt new approaches and adapt accordingly. For example, as research emerged suggesting burnout could affect employees from all sectors the narrow focus on human services workers was expanded and the MBI updated. This willingness to adapt and integrate research findings must be seen a strength of burnout as a concept.

Debate also continues in relation to the key factors in the development and progression of burnout. By and large two camps exist in the debate on models of burnout development. Those who take a structural approach focus on the environmental factors that can contribute to, or protect against burnout, while those who follow the transactional approach take a more complex view by integrating personal characteristics and attributes into their models. Each approach has provided valuable insights and aided current understanding of the burnout phenomenon which was initially seen as a rather speculative and eclectic construct with no clear theoretical basis (Schaufeli & Buunk, 2003).

Thanks to the wealth of studies on the various factors that influence burnout development we are now in possession of a number of robust theories explaining burnout development. While differences remain between theories regarding the relative importance placed on particular types of factor, there is broad agreement that the demands and resources present in the workplace and how they are perceived are all of importance in determining whether or not an individual will become burned out. This is reflected in the current investigation which assesses the role of both environmental and personal variables in the development of burnout in Irish second level teachers.

As discussed in the introductory chapter, teaching has repeatedly been identified as a particularly stressful occupation, prone to high levels of burnout (e.g. Johnson et al., 2005). As a result, teaching has been and remains a focus of much research on burnout. In common with other professions, both structural and transactional approaches have been taken in research on burnout in teachers and

as a result much is known regarding the important environmental and personal factors that play a role in its development. Nevertheless, there remains a lack of research integrating both approaches, with a few notable exceptions (e.g. Kokkinos, 2007; Betoret, 2009).

In the following chapters the key findings in relation to the various environmental and individual factors identified as being important in teacher burnout will be outlined. Research on the physical and psychological health implications of burnout will be described. Specific hypotheses to be investigated will also be stated.

### **3. Individual Differences**

While much research on burnout has focused on its environmental correlates, the role of individual difference factors such as personality traits, self-efficacy beliefs, etc. in stress and burnout is increasingly taken into account by researchers.

Transactional models (e.g. Lazarus & Folkman, 1984) place particular importance on the interaction between person and environment in predicting burnout. Maslach et al. (2001) suggested that unique individual qualities including demographic variables, personality characteristics and work-related attitudes play an important role in burnout alongside situational variables.

This chapter will explore the literature on the role of individual differences in burnout development, with a particular focus on findings in relation to teachers. Research on individual differences has included a variety of factors such as personality traits, core self-evaluations and self-efficacy amongst others, and findings in relation to these constructs have informed the current investigation. This chapter will start with an overview of the “Big Five” personality traits and their relationships with the three dimensions of burnout. Next, the relatively new construct of Core Self-Evaluations will be introduced and its links to burnout, personality and self-efficacy will be outlined. Finally, self-efficacy will be discussed with a particular focus on teacher self-efficacy and its role in the burnout process.

### 3.1 Personality and Burnout

While numerous definitions and theories of personality exist, it is generally held to refer to the particular combination of enduring thought, attitude and behaviour patterns that characterise an individual. The most prevalent current theory of personality is the Five-Factor Model which outlines five broad traits: openness, conscientiousness, extraversion, agreeableness and neuroticism/emotional stability (Costa & McCrae, 1992).

- *Openness*: the extent to which one desires uniqueness, change, and variety.
- *Conscientiousness*: the extent to which one is achievement-oriented, dependable, organised and responsible.
- *Extraversion*: the extent to which one is cheerful, gregarious, fun-loving and enthusiastic.
- *Agreeableness*: the extent to which one is cooperative, caring, trusting and sympathetic towards others.
- *Neuroticism*: the general tendency towards negative emotions such as anxiety, depression, hostility, frustration and guilt. Sometimes referred to as its inverse – *emotional stability*.

Personality plays an important role in the development of burnout and its progression over time (Armon, Shirom & Melamed, 2012). Personality characteristics predispose people to view adverse events in a way that can either

enhance or impair the coping process and its psychological and physical health outcomes (Kaplan, 1996). A number of personality traits and personality-related constructs have been identified as predictors of burnout throughout the working population.

Alarcon, Eschleman and Bowling (2009) performed a meta-analysis of 121 papers on personality characteristics and related constructs, and their links to burnout. It was found that employee personality was consistently related to the three dimensions of burnout. In relation to the five factors, neuroticism, extraversion, conscientiousness, agreeableness and optimism were all found to predict variance in the three dimensions of burnout to a significant degree. Specifically in relation to emotional exhaustion, emotional stability was found to have a significant negative mean correlation ( $\rho = -0.50$ ), along with extraversion ( $\rho = -0.26$ ), conscientiousness ( $\rho = -0.21$ ) and agreeableness ( $\rho = -0.17$ ). Openness did not have a significant mean correlation with emotional exhaustion. A regression analysis found that the five factors explained 29% of the variance in emotional exhaustion, with emotional stability, extraversion, conscientiousness, agreeableness and openness all explaining unique variance.

Meta-analyses of the relationships between the 'big five' personality traits and depersonalisation yielded a similar pattern of results. Emotional stability ( $\rho = -0.40$ ), agreeableness ( $\rho = -0.35$ ), conscientiousness ( $\rho = -0.26$ ) and extraversion ( $\rho = -0.26$ ) were found to have significant negative correlations with depersonalisation. Openness was again found to have no significant mean correlation with depersonalisation. Regression analysis found that the five factors explained 26% of



the variance in depersonalisation, with emotional stability, extraversion, conscientiousness, agreeableness and openness all explaining unique variance.

Finally analysis of mean correlations between personality traits and personal accomplishment found that emotional stability ( $p = 0.29$ ), extraversion ( $p = 0.36$ ), conscientiousness ( $p = 0.22$ ), agreeableness ( $p = 0.23$ ) and openness ( $p = 0.22$ ) were all significantly and positively related to personal accomplishment. Regression analysis found that the five factors explained 23% of the variance in personal accomplishment, with emotional stability, extraversion, conscientiousness, agreeableness and openness all explaining unique variance.

The findings of the Alarcon et al. (2009) meta-analysis suggest that the big five personality traits have an important relationship with burnout. It was notable that some traits had stronger relationships with burnout dimensions than others. In particular, emotional stability or neuroticism was found to have relatively strong relationships with both emotional exhaustion and depersonalisation. It has been suggested that as these are all “affective-oriented” variables, they will correlate more strongly than “non-affective variables” (Weiss, 1996). Overall, the findings of this meta-analysis provide support for the role of personality in burnout. Failing to include personality variables in research assessing potential contributors to burnout would ignore potentially significant contributors to the variance in burnout dimensions.

In research specific to teachers, similar links between the big five traits and burnout dimensions have been found. Kokkinos (2007) found that both personality and environmental factors were associated with burnout dimensions. Neuroticism

was identified as a significant predictor of all three burnout dimensions (emotional exhaustion, depersonalisation and reduced personal accomplishment), supporting similar findings relating both to teachers and other professions (e.g. Cano-Garcia, Padilla-Munoz & Carrasco-Ortiz, 2005). Neurotic people tend to express more negative emotions, emotional instability and stress reactions, and therefore become vulnerable to burnout and other psychological disturbances (Watson, Clark & Harkness, 1994).

Conscientiousness and extraversion have also consistently been found to be related to the depersonalisation and personal accomplishment dimensions of burnout while findings on the role of openness and agreeableness have been somewhat mixed. Kokkinos' (2007) study of Cypriot teachers found that those with low conscientiousness tended to have higher scores on these dimensions while teachers low in extraversion were also more likely to experience burnout.

Conscientiousness is a dimension related to involvement, and persistence, and is reflective of an individual's need to achieve. It is also related to traits of punctuality and organization, which are significant work attributes, and as such, high scores on conscientiousness predict success at work (Hogan, Hogan, & Roberts, 1996).

Extraversion is also important in the burnout process, as introverted individuals are more passive and less likely to engage in social exchange and positive emotionality. These characteristics are believed to foster emotional exhaustion and depersonalisation, as well as diminish personal accomplishment (Cano-Garcia et al., 2005).

The research presented above suggests a direct effect of personality on burnout, however there is evidence to suggest that the relationship may be more nuanced (Hudek-Knezevic, Krapic & Kardum, 2006). Grant and Langan-Fox (2007) in a study of burnout in department store managers, found that neuroticism and extraversion had a particularly important role, and directly predicted ill health and job strain in employees. Conscientiousness did not have a direct relationship with strain, but partially moderated the effects of job stress on job satisfaction. Such findings suggest that more research is required to clarify the precise role of each trait in the stressor-strain relationship.

### **3.2 Core Self-Evaluations**

A growing body of research has emerged suggesting that a broad personality trait, termed core self-evaluations, is a significant predictor of a variety of work-related outcomes including job performance, job satisfaction and burnout (Judge, Erez, Bono & Thoresen, 2003). Core self-evaluations (CSE) refer to the fundamental premises that individuals hold about themselves and their functioning in the world (Judge, Erez & Bono, 1998). CSE is a broad, latent higher-order trait indicated by four prominent traits in personality literature:

- *Self-esteem*: the general overall value that one places on oneself as a person.
- *General self-efficacy*: an evaluation of how well one can perform across a variety of situations.

- *Locus of control*: beliefs about control over events in one's life.
- *Neuroticism*: the tendency to have a negative cognitive/explanatory style and to focus on negative aspects of the self.

In attempting to identify the dispositional factors that contributed to job satisfaction Judge, and colleagues (2002) identified significant relationships between these four traits. Meta-analysis revealed an average correlation of 0.6 between the four traits. Using factor analysis, each of the four traits has consistently been found to have loadings greater than 0.7 on a higher-order factor (Erez & Judge, 2001). The CSE construct has received empirical support for its validity and reliability (e.g. Gardner & Pierce, 2010; Holt & Jung, 2008).

Nevertheless, it has been argued by both Judge and colleagues (2003), who first identified the higher-order trait, and others that work needs to be done to establish the theoretical basis for CSE, a problem also identified in relation to the Five Factor Model of personality (Johnson, Rosen & Levy, 2008). Both Core Self-Evaluations and the 'Big Five' have essentially been constructed solely on the basis of the clustering together of their constituent traits under factor analysis. There remains a lack of clear understanding and explanation as to their underlying causes and theoretical basis.

### **3.2.1 CSE and the Big Five:**

Debate exists regarding the relationship between core self-evaluations and the Big Five personality traits. It is possible that CSE represents an aspect of personality that isn't covered by the Five Factor Model (Bono & Judge, 2003). The presence of neuroticism as a constituent trait of both core self-evaluations establishes a clear link between CSE and the Big Five paradigm. In addition, it has generally been held that extraversion and conscientiousness are moderately related to CSE (Bipp, 2010; Judge et al, 2003), however some research has failed to support the link between extraversion and CSE (Chamorro-Premuzic, Ahmetoglu & Furnham, 2007). A recent meta-analysis found that extraversion ( $\rho = 0.49$ ) and conscientiousness ( $\rho = 0.45$ ) have a strong positive relationship with CSE, while agreeableness ( $\rho = 0.28$ ) had a moderate positive relationship (Ferris, Johnson, Rosen & Tan, 2012).

A number of papers have explored the links between CSE and the Big Five by comparing their relationships with job-related factors. In research investigating the contributors to job satisfaction, only CSE was found to have a significant, unique relationship with job satisfaction, with the big five traits and positive and negative affect failing to display a significant contribution (Judge, Heller & Klinger, 2008). The authors argue that any paper wishing to examine the relationship between personality and job satisfaction that ignores CSE is leaving potentially explainable variance 'on the table'. This assertion is supported by the findings of Bipp (2010) that CSE made a unique contribution of 5-7 % of the variance in a variety of work-related constructs, when controlling for demographic factors and the Big Five. As job satisfaction has been found to be highly related to burnout, these findings are

relevant to the current study (Visser, Smets, Oort & De Haes, 2003; Wolpin, Burke & Greenglass, 1991)

Clearly more investigation of the links between CSE and the Big Five traits will need to be performed before concrete conclusions can be made. The literature to date suggests that, though core self-evaluations are related to several of the big five traits, it is a useful construct in its own right. Employee core self-evaluations have been found to be related to variety of work-related outcomes, of relevance to the current research.

### ***3.2.2 Core Self-Evaluations, Stress and Burnout:***

While research on the links between Core Self-Evaluations, job stress and burnout is in its relative infancy, a number of studies have identified significant links. An overview of several papers investigating the links between CSE, stress and burnout is provided below.

Those individuals with positive perceptions of their value and efficacy in the world generally tend to hold more positive perceptions of their work environment than those with more negative self-evaluations (Stumpp, Hulsheger, Muck & Maier, 2009). High CSE employees are also generally more satisfied in their jobs and better performers than low CSE workers (Judge & Bono, 2001). These findings suggest that Core Self-Evaluations play a role in perception of stress in the workplace, and by extension, the development of burnout. Research to date supports the notion of CSE as a significant predictor of job stress (Brunborg, 2008) and burnout (Best,

Stapleton & Downey, 2005). Alarcon and colleagues' meta-analysis (2009) found that CSE was a significant predictor of each of the three dimensions of burnout. CSE had a positive relationship with personal accomplishment and negative relationships with both depersonalisation and emotional exhaustion. Several explanations have been offered to account for the relationship between CSE and burnout.

Conservations of Resources theory (Hobfoll, 1989) is based on the notion that workers will strive to gain and protect work-related resources (favourable conditions, social support, pay, etc.). When these resources are threatened or lost, individuals become more likely to experience stress and other negative consequences. Core Self-Evaluations are believed to provide individuals with beneficial coping resources. That is, those individuals with a positive self-concept appear to have additional buffers against resource loss, actual or threatened, than those with more negative self-concept (Harris, Harvey & Kacmar, 2009; Best et al., 2005).

CSE has also been conceptualized as a beneficial coping resource under the transactional model of stress (Lazarus & Folkman, 1984). The transactional model characterises stress as the result of an imbalance between demands and resources. When a demand (stressor) is placed on an employee their coping mechanisms determine whether they will cope successfully. Recent research suggests that employee core self-evaluations play an important role in determining resilience to stressors, as well as the type of coping those subjected to stress will engage in (Harris et al, 2009).

Employees high in CSE tend to use less avoidance coping and more problem-solving coping than those low in CSE (Kammeyer-Mueller, Judge & Scott, 2009). Problem-solving coping involves determining effective strategies for reducing strain levels, establishing specific behavioural targets, and engaging in behaviour that will help solve problems. Problem-solving coping is generally regarded favourably in the stress literature, as evidence suggests it is effective in reducing long-term strain (Higgins & Endler, 1995). Conversely, avoidance coping involves maladaptive avoidance of problems by removing oneself from the situation that is causing stress, excessive use of alcohol and illegal drugs, or distracting oneself. Use of avoidance coping can lead to considerably higher levels of strain in the long term (De Jong & Emmelkamp, 2000). Thus CSE may be seen to predispose individuals to choose a more adaptive coping style in dealing with the demands of the workplace, reducing the likelihood of developing burnout over time.

In summary, those individuals with positive beliefs about their worth and abilities are more likely to perceive their work environment positively than those with negative beliefs. Furthermore, when these positive individuals experience potentially problematic situations at work they are more likely to deal with the situation in a direct and adaptive manner, protecting them from experiencing further stress.



### **3.3 Self-Efficacy**

Self-efficacy refers to an individual's beliefs about their ability to perform the behaviours needed to achieve a desired outcome (Bandura, 1997). Those individuals with high levels of self-efficacy have confidence in their ability to do what it takes to overcome obstacles and achieve their goals. Specifically in relation to teachers, self-efficacy generally refers to an individual teacher's belief in their ability to plan, organise and carry out activities required to attain valued educational goals (Skaalvik & Skaalvik, 2007). Bandura, in accordance with social cognitive theory, proposed four major sources of efficacy beliefs: enactive mastery experiences, vicarious experiences, verbal persuasion and physiological reactions. Applying this to teachers, support from, and successful interactions with, principals, students, colleagues and parents; and opportunity for observation of successful colleagues build self-efficacy for teaching (Tschannen-Moran, Woolfolk Hoy & Hoy, 2001).

Efficacy beliefs play an important role in determining how environmental challenges are perceived and affect an individual's reaction to these challenges (Bandura, 2006). Efficacious teachers enhance student achievement and motivation, pursue their goals and cope well with demands placed on them (Schwarzer & Hallum, 2008). In contrast, low self-efficacy teachers are more likely to report lower job satisfaction, higher levels of stress, depression, anxiety and helplessness (Betoret, 2006). As a result, teacher self-efficacy is very often taken into account in studies of workplace performance and job stress.

In the literature on teacher self-efficacy to date, differences have emerged between researchers regarding the way in which the construct is conceptualised and measured. In particular, there is debate as to whether teacher self-efficacy should be measured as a one-dimensional construct (e.g. Schwarzer, Schmitz & Daytner, 1999), or a multi-dimensional construct (e.g. Skaalvik & Skaalvik, 2007). As a result there are a variety of psychometric instruments available to measure teacher self-efficacy, potentially hampering easy comparison of findings across studies.

In addition to the four major sources of self-efficacy outlined by Bandura, a number of additional contributors have been identified in the literature. Research has found that teacher self-efficacy tends to change over the course of a teaching career. Klassen and Ming (2010) found that teachers mid-way through their careers had significantly higher self-efficacy than those teachers in early and later career stages. Teacher self-efficacy is believed to be particularly malleable for teachers in the early stage of their careers (Tschannen-Moran & Woolfolk Hoy, 2001). These findings correspond with those of Huberman (1989), who suggested that teachers gradually become more stable and self-confident in their work until reaching a mid-career peak, after which a process of disengagement develops. A variety of factors are believed to contribute to this late-career reduction in self-efficacy, i.e. physical health, weighting of work and leisure related values, and stereotyped beliefs about age-related decline in competence by students and colleagues (Kooij, de Lange, Jansen & Dikkers, 2008).

### ***3.3.1 Teacher Self-Efficacy and the Big Five***

In addition to demographic and environmental factors, research has indicated that personality traits contribute to teacher self-efficacy perceptions. Judge and Ilies (2002) performed a meta-analysis of studies involving self-efficacy and personality traits, finding significant correlations between self-efficacy and neuroticism, conscientiousness and extraversion. These findings linking personality traits and work-related self-efficacy support previous research which found that highly conscientious individuals tend to set more ambitious goals for themselves and to be more dedicated to achieving these goals than less conscientious workers (Gellatly, 1996). In addition, individuals high in extraversion and agreeableness are more likely to experience positive interpersonal interactions at work, contributing to increased self-efficacy in the workplace (Mount, Barrick & Stewart, 1998).

Despite these findings, there remains a distinct lack of research including both self-efficacy and personality traits in predicting work outcomes. This is largely due to Bandura's assertion that in any investigation of inherently work-specific constructs such as job performance, job stress, etc., the influence of situation-specific self-efficacy should overwhelm that of distal variables such as personality traits (Bandura, 1997). However, recent research has cast doubt on this contention. Judge et al. (2007) assessed the relative contributions of personality traits and work self-efficacy to job satisfaction, and found that conscientiousness, extraversion and neuroticism were all stronger predictors than self-efficacy. It is clear that more research is needed in order to untangle the contributions of states and traits to work-related outcomes such as stress and burnout.

### ***3.3.2 Self-Efficacy and Core Self-Evaluations***

General self-efficacy forms one of the constituent traits of the core self-evaluations construct, suggesting a likelihood of a relationship between CSE and teaching efficacy. Self-efficacy is usually recognized as being either task-specific or domain-specific. However, some researchers have developed the idea of a more general sense of self-efficacy that refers to a stable sense of competence in dealing with a range of stressful situations (Luszczynska, Scholz & Schwarzer, 2005).

General self-efficacy has been found to be significantly related to situation-specific self-efficacy (Cervone, 1997; Luszczynska et al. 2005). Given the significant relationships between general self-efficacy and the three other traits that constitute core-self evaluations, it is expected that CSE will be significantly related to situation-specific perceptions of teaching efficacy.

### ***3.3.3 Teacher Self-Efficacy, Stress and Burnout***

As outlined earlier, teacher self-efficacy is related to perceptions of workplace environment and individual reactions to the challenges/threats that present themselves. As such, it is likely that teacher self-efficacy is important in determining whether teachers view the workplace as positive and challenging, or negative and stressful. In support of this assertion, Klassen and Ming (2010) found that teachers with lower levels of self-efficacy also reported higher levels of job stress.

Longitudinal research suggests that teacher self-efficacy influences job stress and burnout (Schwarzer & Hallum, 2008), though it has also been argued that

the relationship is reciprocal (Skaalvik & Skaalvik, 2010). While debate remains around the direction of the relationship, there is broad agreement with the conceptualisation of self-efficacy as a coping resource factor in dealing with workplace stressors (e.g. Betoret, 2006; Schwarzer & Greenglass, 1999; Tsouloupas et al, 2010). Skaalvik and Skaalvik found that teacher self-efficacy was a significant negative predictor of emotional exhaustion and depersonalisation in a sample of over 2,000 Norwegian teachers, mirroring the findings of Schwarzer and Hallum. Personal accomplishment was not included in the analyses of these two papers as it was suggested that conceptually it was very closely linked with the concept of self-efficacy. Personal accomplishment has indeed been found to have a significant positive relationship with teacher self-efficacy (Skaalvik & Skaalvik, 2007). It is evident that teachers with strong beliefs in their capabilities to handle the stresses in the classroom and wider school environments are significantly less likely to become burned out.

In summary, teacher self-efficacy influences perceptions of work environment and how individuals react to the challenges it presents to them. Those teachers with positive self-efficacy tend to be more satisfied and better performers than those teachers with negative perceptions of their self-efficacy. Self-efficacy has been described as having a protective effect against burnout development. While differences remain regarding its conceptualisation and measurement, self-efficacy has been found to be a very important factor in the development of a number of teacher outcomes, including stress and burnout. As a result it has been

included in the current study as it is expected to be significantly related to personality traits, perceptions of the work environment, and burnout development.

### **3.4 Summary of Individual Differences Literature**

In the history of burnout research there has been an almost overwhelming focus on the role of environmental factors in its development. However, there is growing appreciation and integration of the important role of individual differences in the stress and burnout process (Alarcon et al., 2009). Transactional models of burnout have long characterised burnout as a dysfunctional relationship between the person and their work environment and pioneering work by Byrne (1994) and others helped underline the importance of both individual difference factors and environmental stressors in influencing burnout development. As more studies emerge integrating individual difference factors such as personality traits, core self-evaluations and self-efficacy alongside environmental factors we are gaining clearer understanding of the specific contributions of each to the three dimensions of burnout.

The Five Factor Model of personality (Costa & McCrae, 1992) and Core Self-Evaluations construct (Judge et al., 1997) offer great potential to researchers investigating individual difference factors in burnout. Prior to the emergence of these models, a wide range of traits ranging from Type A personality to positive and negative affectivity were assessed by individual researchers interested in their role in burnout (Grant & Langan-Fox, 2007). However, such efforts were relatively uncoordinated and the lack of a consistent direction in the conceptualisation of personality rendered comparison of findings difficult.

The emergence of the Big Five and CSE has provided a useful and stable platform for researchers interested in personality and has facilitated uncomplicated

comparison of research findings. As outlined earlier in the chapter, clear relationships between specific traits and stress outcomes have been identified and the precise role of individual differences in stress and burnout is increasingly understood. Several recent papers (e.g. Cano-Garcia et al., 2005; Kokkinos, 2007) specifically investigating burnout in teachers have assessed the role of individual differences alongside environmental factors and progress has been made towards the development of integrative models of burnout in teachers.

In addition to general traits, situation-specific factors such as self-efficacy have been explored in some detail. Bandura (2006) outlined the importance of efficacy beliefs in influencing how environmental opportunities and challenges are perceived. Investigation of the role of self-efficacy in teachers has highlighted its importance in predicting individuals' goals, attitudes towards innovation and change, and development of burnout (Skaalvik & Skaalvik, 2010). It has been suggested that targeted measures to increase teacher self-efficacy could prove effective in providing individual teachers with the resources they need to successfully cope the stresses of the job (Skaalvik & Skaalvik, 2007).

Evidently individual difference factors are of great importance in the burnout process – employees faced with the same environmental demands often react quite differently. While research interest in the role of individual differences in stress and burnout has a long history, it is only in relatively recent times that comprehensive, integrative and efficient frameworks such as the Five Factor Model of personality have emerged. This has facilitated convenient comparison of research findings and greatly aided in the understanding of the role of individual



differences in burnout. While much has been learned thus far, it is evident that more research is required to clarify the exact contribution of individual traits in conjunction with environmental factors in determining the course of burnout development in individuals. The current investigation aims to contribute to this area of inquiry with specific reference to the experiences of Irish second-level teachers.

## **4. Work Environment**

As burnout is considered to be a syndrome specific to the work context, identifying contributory work environment factors has consistently been a focus of research throughout the history of burnout inquiry. This process has helped identify numerous relevant factors and has aided in the construction of a number of robust structural models of burnout. With the addition of recent findings on individual differences, there now exists the beginning of a comprehensive understanding of the key factors and processes in burnout development.

While definitions of what constitutes the work environment vary depending on perspective, it generally refers to the physical, sociocultural and organisational characteristics unique to an individual workplace (Byrne, 1994). Every workplace can present demands, challenges and support to employees and exploring these characteristics is of crucial importance to those wishing to understand their impact on employee wellbeing.

Lee and Ashforth's (1996) meta-analysis of the correlates of burnout analysed 61 papers and identified dozens of demands and resources present in the work environment, related to the three dimensions of burnout. The major work stressors included role ambiguity, role conflict, workload and time pressure, while resources included social support (from colleagues, supervisors and friends), autonomy and rewards for performance. As discussed previously, structural models of burnout (e.g. Job Demands-Resources Model, Conservation of Resources Model)

generally propose that the presence of job demands and the absence of, or threats to, job resources can contribute to burnout. While these models provide a useful general framework for burnout research, it is important to note that individual occupations and workplaces present different environments to employees which may influence the course of burnout development (Maslach et al., 2001). Since the current investigation focuses on the experiences of teachers, it is necessary to appraise the specific work environments they experience in their schools and classrooms.

As noted in the introductory chapter, teachers experience a complex work environment involving varied interactions with students, colleagues, principals and parents. Research suggests that school and classroom environments and the quality of relationships within them can be instrumental in influencing the nature and severity of stressors experienced by teachers (Grayson & Alvarez, 2008). In general, teachers with negative perceptions of school-level and classroom-level environments tend to report higher levels of each of the three dimensions of burnout than those teachers with a positive view of their work environment (Dorman, 2003).

#### **4.1 School and Classroom Environments**

In research assessing the impact of environmental factors on teacher burnout, a distinction is often made between classroom environments and wider school environments (e.g. Dorman, 2003). The types of roles, interactions, demands and

resources present in each environment can vary quite considerably and as a result can have differential influence on teacher burnout and other outcomes (Dorman, Fraser & McRobbie, 1997). This categorisation is largely in line with Forlin's (2001) review of 72 papers on sources of teacher stress which identified 24 major stressors clustered into three categories – administrative, classroom-based and personal. Betoret (2009) took a similar but slightly different view, categorising environmental stressors as classroom-level, school-level and administration-level, which refers to wider policy issues external to the school.

In the current research, it was decided to adopt the classroom-level and school-level categorisations, with external issues (e.g. interactions with parents and community) also taken into consideration under the school-level category. Previous findings in relation to both classroom and wider school environments will be presented and discussed in this chapter. The relationship between environmental factors and burnout will be expanded upon throughout. Finally, findings from the small number of studies carried out in Ireland will be explored.

As the current research focuses on the experience of secondary school teachers, the literature review will primarily present findings from those papers that specifically deal with such teachers. Fraser (1998) suggests that classroom environments vary across school types (i.e. primary and secondary schools), with students having a more negative view of their classroom environments in secondary school. Primary school teachers spend far more time with an individual class than secondary teachers do, which may affect student-teacher interactions and relationships. Byrne (1994) and Betoret (2009) both compared burnout

development in both primary and secondary teachers and found slight differences in the stressors and pathways leading to burnout. Thus, while primary and secondary teachers share many of the same type of experiences and environmental stressors, it is also important to be aware of the differences.

#### ***4.1.1 School Environment and Burnout***

Many school-level factors have been identified as relating to teachers' occupational stress, ranging from the quality of relationships with parents, colleagues and supervisors to adequacy of school resources. Friedman's (1991) comparison of the organisational characteristics of 'high burnout' schools (those in which teachers reported high levels of burnout) and 'low burnout' schools in Israel demonstrated the importance of school climate factors such as supervisor support, teacher autonomy and work pressure on burnout development in individual teachers. High burnout schools typically had a rigid management structure where decisions came from the principal and teachers did not work as a team. In contrast, low burnout schools typically had much looser structures where teachers could speak to the principal regularly and contribute to decision-making within the school. In addition, teachers in low burnout schools were also found to socialise with each other more regularly than those in high burnout schools.

Byrne's (1994) study helped elaborate on Friedman's findings by examining the specific environmental and personal antecedents to each burnout dimension in a Canadian sample. Byrne assessed hypothesized causal paths to each burnout

dimension and found that school-level factors including social support and participation in decision-making played an important but indirect role in burnout development. Specifically, participation in decision-making influenced teacher self-esteem and locus of control, which in turn were significant positive predictors of personal accomplishment. Peer support was also found to predict self-esteem. Byrne's findings suggest that classroom and personal variables have a more direct influence on burnout than school-level variables. A number of more recent papers have since explored this contention with somewhat mixed results.

One such study conducted by Dorman (2003) in Australia examined the relationships between school and classroom-level factors and the three dimensions of burnout. School-level factors including staff affiliation, consensus and work pressure were found to predict emotional exhaustion and depersonalisation, while classroom factors such as student cooperation and interactions were found to predict personal accomplishment. These findings contradict those of Byrne, who found a strong influence of classroom climate on emotional exhaustion and depersonalisation, and no significant relationship between these dimensions and school-level factors. While Byrne and Dorman assessed slightly different aspects of the school environment using different instruments, it is noteworthy that Byrne found no significant associations between colleague support and emotional exhaustion for example, while Dorman's study identified mission consensus and affiliation (both of which relate to staff relationships and support) as significant predictors of emotional exhaustion.

Several relatively recent studies of teacher burnout conducted in Spain have supported the view that school-level factors can be key contributors to each dimension of burnout. Cano-Garcia et al. (2005) identified several school-level factors as significant predictors of burnout. Emotional exhaustion was found to be significantly predicted by difficult relations with administrators, lack of promotion opportunities and awareness of a lack of professional prestige. Depersonalisation was found to have no significant environmental predictors, while personal accomplishment was predicted by school type and relations with students. This study was relatively small in scale (99 participants) and environmental factors were each assessed with a single item, so the extent to which its findings may be generalised appears somewhat limited.

Two larger-scale studies by Betoret have provided a more comprehensive account of the relationship between environmental factors and burnout in the Spanish context. Betoret (2006) reported that heavy workload, relationships with other teachers and demands associated with school authority guidelines were the most notable school-level predictors of burnout. However, as burnout was measured using a specially developed scale assessing four dimensions it is not easy to compare findings. A more recent paper by the same author addressed this issue by administering the MBI to a sample of 407 secondary school teachers in Spain (Betoret, 2009). This study again identified the importance of school and administrative factors such as decision-making and workload in predicting emotional exhaustion and depersonalisation. It was also found that positive self-

efficacy beliefs mitigated the negative impact of job stressors on individual teachers.

A further Spanish study of 1,386 secondary school teachers, though largely focused on student-related stressors, found school-level factors to play a significant role in burnout (Otero-Lopez et al., 2008). Specifically, organisational support in relation to disciplinary issues significantly predicted all three burnout dimensions, but was particularly related to depersonalisation. Thus, teachers who felt their colleagues and supervisors did not support them on disciplinary matters were more likely to experience high levels of depersonalisation. This finding was supported somewhat by a US study of 320 teachers in Ohio, which found that depersonalisation was particularly predicted by factors related to relationships within the school system, with both students and administration (Grayson & Alvarez, 2008). Teachers who were satisfied with the decisions and support provided by school administrators had significantly lower levels of depersonalisation.

While debate remains regarding the specific pathways between school-level factors and burnout, it is evident from research findings across the world that the characteristics and climate of the schools in which teachers work play an important role in burnout development. The expectations, roles and relationships within schools may contribute to, or protect against, burnout in the individuals employed there and it is thus imperative to identify and understand their role. These factors may provide a useful target for interventions aiming to improve the working



environment in order to tackle burnout development (Halbesleben & Buckley, 2004).

#### ***4.1.2 Classroom Environment and Burnout***

The role of classroom-level factors in burnout has been alluded to in the discussion on school-level factors and will be explored in detail in this section. From the earliest stages of teacher burnout research, classroom and student matters have featured heavily as potential contributors (e.g. Farber & Miller, 1981; Blase, 1986). This is perhaps unsurprising as most teachers spend a large proportion of their time in the classroom interacting directly with students. It has consistently been found that positive classroom environments are linked to teacher wellbeing, and also with better cognitive and affective outcomes among students (Dorman, Fraser and McRobbie, 1997).

Fraser (1998) suggests that classroom environments vary across school types (i.e. primary and secondary schools). Other factors identified in the literature as having an impact on classroom environment include class size, year level, student sex, teacher sex and subject being taught (Dorman et al., 1997). Thus, the experiences of teachers may vary from classroom to classroom depending on a variety of factors. Much evidence has been gathered on the impact of specific classroom factors on burnout in teachers. For example, teachers who believe they have a well-controlled, positive and interactive environment in their classrooms

tend to have lower levels of burnout than teachers without this positive view (Brouwers & Tomic, 2000).

Byrne (1994) found that classroom climate was a significant, direct predictor of both emotional exhaustion and depersonalisation. In this study, classroom climate was conceptualised as relating to student behaviour in class, interest in their work, academic achievement and interactions with teachers. Results of the study suggest that as classroom climate deteriorates, teachers become increasingly exhausted by their work and develop negative attitudes towards their students and their profession. Byrne proposed that increasing class sizes may have a negative impact on classroom climate, an issue that is of relevance in Ireland currently as student/teacher ratios have risen recently and may continue to do so. Recent findings suggest that class size is significant predictor of emotional exhaustion as teachers with large classes face additional pressure to maintain order as well as provide individual students with the attention they may require (Cano-Garcia et al., 2005).

While Byrne's findings suggest that classroom factors influence emotional exhaustion and depersonalisation, Dorman's (2003) findings were slightly different. Dorman found that classroom factors were particularly influential towards personal accomplishment, with teacher-student interactions, task orientation and student cooperation all identified as significant predictors. However, classroom order and organisation was a significant negative predictor of emotional exhaustion and student cooperation a significant negative predictor of depersonalisation. These

findings suggest each aspect of burnout may be predicted by different classroom-level factors, depending on their nature.

Student indiscipline and disruptive behaviour has consistently been found to relate to burnout (e.g. Hakanen et al., 2006; Kokkinos, 2007). In a recent study of over 2,000 Norwegian teachers, Skaalvik and Skaalvik (2010) found that teacher perceptions of student discipline problems significantly predicted depersonalisation and emotional exhaustion. This finding concurs with the results of analysis by Kokkinos who found that student misbehavior was the most significant factor in explaining the variance in both emotional exhaustion and depersonalisation. The results of these studies suggest that dealing with disruptive students is particularly demanding of teachers' emotional resources. It is likely that experiencing persistent difficulties with students puts individuals at risk of high levels of emotional exhaustion and depersonalisation.

While discipline is clearly particularly relevant, a number of other classroom-level factors have been found to predict burnout. Grayson and Alvarez (2008) identified student-peer relations (the extent to which students respect one another and feel a sense of belonging at their school) as a significant predictor of emotional exhaustion. Forlin (2001) identified issues in relation to the inclusion of children with special educational needs in mainstream classes as being a potential source of stress. Blase's (1986) study of a sample of almost 400 US teachers identified student apathy and poor achievement as potential sources of stress.

From the very early stages of burnout research in teachers, the importance of classroom-level factors has been acknowledged and investigated. In particular,

issues in relation to student misbehaviour have been identified in studies conducted across the globe as being significant predictors of burnout development. While the precise nature of these relationships remains open to discussion, a growing body of evidence suggests that each burnout dimension is influenced to some extent by classroom factors. The current research aims to provide further information on these relationships with specific reference to the experience of Irish teachers.

#### ***4.1.3 Previous Findings in Ireland***

While no previous study has assessed teacher burnout in Ireland, a small number of studies have explored environmental contributors to stress in Irish teachers. The earliest such study by Wynne, Clarkin and Dolphin (1991) assessed sources of stress among primary and secondary teachers in Ireland. A number of relevant environmental factors were identified by secondary school teachers at both classroom and school levels. School-level factors included workload, salary, colleague and management support, inadequate school resources and lack of career progression opportunities. At the classroom level, poor student discipline and motivation, high teacher/student ratios and student academic performance were each found to be stressful. While this study took place some time ago, it nevertheless provides some useful insights upon which to base further inquiry.

A more recent study conducted by Kerr and colleagues (2011) employed qualitative interviews with 15 secondary school teachers to explore their

experiences of occupational stress. This study found that participants found dealing with the personal problems of their students challenging. These often originated outside of the school and the issue of ambiguous teacher-student 'boundaries' and lack of official guidelines left some participants unsure of how to best to handle such issues. Classroom management was another important issue, with most participants describing maintenance of control in class as 'very stressful'. Experiencing verbal and physical abuse and having limited powers of reprimand were also cited as being stressful. Finally, heavy workload was consistently identified as stressful by participants. Again, while this study is limited by its small sample size, it provides more useful information on the experiences of Irish teachers.

The two papers discussed have provided useful background information for the current study by outlining established sources of stress in Irish secondary teachers. While neither paper examined burnout specifically, they provide important evidence of the factors that influence school and classroom environment in Irish schools. The current investigation will employ focus groups in order to gain an insight into the environmental factors that Irish teachers currently perceive as being stressful. Focus group findings, in conjunction with those investigated in the literature above, will aid in the selection of survey instruments to measure and assess the contribution of school and classroom environment factors to burnout in teachers.

## **4.2 Summary of Work Environment Literature**

While every workplace presents its own unique environmental circumstances, a number of common factors have been found to contribute to, or protect against, stress and burnout in employees. Meta-analyses (e.g. Lee & Ashforth, 1996) have helped identify the importance of specific environmental factors such as role clarity, colleague support and autonomy in burnout, which in turn has facilitated the development of explanatory models of burnout such as the Job Demands-Resources Model (JD-R; Demerouti et al., 2001). Such efforts have been greatly beneficial to those who wish to reduce the impact of burnout by developing interventions designed to tackle problematic factors and encourage supportive ones. These general findings on work environment have been important in providing a basis for specific investigations of school and classroom environments.

As teaching has been consistently been found to be a particularly stressful occupation (e.g. Johnson et al., 2005), much research has been dedicated to identifying the specific factors that contribute to individual teachers feeling stressed and burned out. At the wider school level, factors such as relations with colleagues and management, involvement in decision-making, work pressure and relations with parents/community have all been found to contribute to burnout. Within the classroom, student misbehaviour, interest, academic achievement and cooperation have been found to be linked to burnout. While these findings have all been helpful, debate continues with regard to the precise pathways between school and classroom factors and each dimension of burnout. Findings have occasionally been somewhat contradictory, for example those of Byrne (1994) and

Dorman (2003), and it is the aim of the current study to contribute to this debate with specific reference to the experience of Irish secondary school teachers.

To date, no research has explored burnout in Irish teachers and the few studies of teacher stress conducted in Ireland have been small in scope and conducted some time ago. Nevertheless, the findings of Wynne, Clarkin and Dolphin (1991) and Kerr et al. (2011) have suggested that Irish teachers share a large number of stressors with their international colleagues. The current study aims to build on these previous studies in carrying out the first comprehensive study of teacher burnout in Ireland.

## 5. Coping

Coping plays an important role in stress and burnout development. Those individuals with positive appraisals of their coping resources and styles are protected against the negative effects of prolonged stress (Lazarus & Folkman, 1984). Coping may be defined as the efforts that people make, both behavioural and cognitive, to change their environment and/or manage their emotions in response to stressful situations (Arnold et al., 2010). A range of coping strategies of varying effectiveness have been described, and the types of coping strategy chosen may be influenced both by personality and environmental factors (Kammeyer-Mueller, Judge & Scott, 2009). Failure to employ an effective coping strategy can ultimately lead to burnout and other health problems.

This chapter will explore the various coping strategies engaged in by those dealing with stress and the extent to which each is effective in alleviating stress. In addition, factors that influence the type of coping strategy employed by individuals will be outlined. Research investigating the importance of coping in the development of burnout and other health issues will be discussed, with a particular focus on studies relating to teachers.



## 5.1 Coping Strategies

Numerous strategies for coping with stressors have been described, including planning a course of action, seeking support from others, relaxation techniques, reframing the problem and use of substances such as alcohol, tobacco or narcotics (Arnold et al., 2010). One qualitative study of coping strategies identified 159 different methods employed by a group of engineers (Newton, 1989). Though many distinct strategies exist, a general categorisation is often made of *problem-focused strategies* (dealing with the original cause of stress) and *emotion-focused strategies* (dealing with how one feels about the stressful situation) (Folkman & Lazarus, 1985). While many of the strategies described have been found to be effective in relieving stress, others can place an individual's health at risk. Such strategies are referred to as *maladaptive coping strategies* and a range of related negative health effects of these approaches have been identified.

In general, problem-solving coping appears to predominate when an individual believes they can change the situation they are in, whereas emotion-focused coping typically predominates when a person feels that the stressor is something that must be endured (Folkman & Lazarus, 1980). The Ways of Coping Scale follows this dichotomous approach and is widely used in coping research (Folkman & Lazarus, 1985). The concept of a distinction between problem-solving and emotion-focused coping has been highly influential, however it has been argued that it is too simple of an approach to a complex phenomenon (Carver, Scheier & Weintraub, 1989). Carver and colleagues pointed out that a number of strategies grouped together under the heading of problem-solving are very

different in character, to the extent that they are occasionally negatively correlated with each other. As a result, Carver et al. developed the COPE measure which incorporates 14 different scales designed to take account of the diverse range of approaches that would fall under the umbrella of problem-solving or emotion-focused strategies. These include active coping, planning, seeking advice and seeking support, amongst others.

In relation to maladaptive coping strategies, it has been found that a proportion of workers will attempt to cope with distressing situations, such as job stressors, by engaging in avoidance and health impairing activities such as smoking, drinking, overeating or substance abuse. These may alleviate stress in the short term but at the expense of damaging health in the long term (Schwarzer, Schuz, Ziegelmann, Lippke, Luszczynska & Scholz, 2007). It has been suggested that high job stress can lead to increased alcohol consumption under what's known as the 'tension-reduction model' (Frone, 2003). Ireland is consistently found near the top of European alcohol consumption tables, with statistics indicating a general trend towards increased consumption between 1970 and 2008 (ECHI – European Community Health Indicators). In light of this finding, the issue of alcohol use as a 'tension reducer' may be of greater relevance in Ireland than in countries that engage in more modest alcohol consumption.

A study carried out by the Royal College of Surgeons in Ireland found that overuse of alcohol and other substances had negative implications for the health of individuals, their relationships with others and their work performance (SLAN 2007; Morgan et al., 2009). For example, employees may be twice as likely to be absent

from work the day after alcohol consumption (McFarlin & Fals-Stewart, 2002).

Evidently, excessive alcohol consumption is a maladaptive and harmful coping strategy that may ultimately contribute to more problems than it solves. It is thus of great importance to understand the factors that influence individuals to employ such strategies.

The approaches outlined by both Folkman and Lazarus and Carver remain popular and influential in coping research and the Ways of Coping and COPE scales are very widely used. While debate remains regarding the categorisation and description of coping strategies, it is widely accepted that coping is a complex process. Individuals experiencing stress may respond in a variety of ways depending on the resources they have available, the specific situation they are faced with, and their own personal characteristics. The effectiveness of the coping strategy employed to alleviate feelings of stress may vary greatly depending on its nature. Many researchers have explored the effectiveness of specific strategies in preventing burnout and the factors that determine an individual's approach to coping. Findings in relation to these issues will be presented in the following sections.

#### ***5.1.1 Coping Strategies and Burnout***

Numerous studies have explored the effectiveness of specific strategies and their relationships with the three dimensions of burnout. It is evident that some

strategies are more effective than others at alleviating stress and preventing burnout.

A study of 187 Australian students' coping responses to general life stresses found that coping strategies had a direct effect on psychological and somatic distress (Beasley, Thompson & Davidson, 2003). Overall, findings suggested that emotion-focused and avoidance coping directly predicted higher levels of physical and psychological health problems. However, it was found that in some circumstances distraction/avoidance coping strategies predicted lower somatic complaints among female participants, suggesting that emotional venting could prove a useful approach in some circumstances. In addition, problem-solving approaches were associated with reduced anxiety scores, though only among male participants. Sex differences in coping styles will be discussed in more detail later in the chapter.

Leiter's (1991) study further supports the idea that active, problem-focused coping is more effective in reducing burnout than passive, avoidance coping. This study, conducted with a sample of 177 workers in a Canadian mental health facility, found that avoidance or escapist coping was particularly ineffective in protecting against burnout. These types of strategy had a significant positive correlation with emotional exhaustion and depersonalisation. In contrast, problem-focused or 'control' coping was found to have a significant negative relationship with emotional exhaustion and depersonalisation, and a significant positive relationship with personal accomplishment. Thus, those individuals who adopted active,

problem-focused strategies were less likely to report high levels of burnout in comparison to individuals who used avoidance or escapist styles of coping.

Studies of coping consistently identify active, problem-focused coping strategies as being effective in dealing with stress and preventing burnout development. In contrast, avoidance or passive approaches appear either to be ineffective or even contributory in burnout development. A number of studies specific to teachers have supported these findings and these studies will be discussed later in this chapter. Many recent studies have explored the factors that influence the type of coping strategy employed by individuals.

### ***5.1.2 Determinants of Coping Strategies***

In line with research on other aspects of the stress and burnout process, research on coping has typically explored both situational and personal factors in attempting to explain the types of coping individuals engage in. It is now generally accepted that both environmental aspects and personal characteristics play an important role in determining how people cope with difficult situations (e.g. Ito & Brotheridge, 2003). The Conservation of Resources model (Hobfoll, 1989) emphasises the importance of both the environmental and personal resources possessed by an individual in governing the type of coping strategy they employ.

Environmental factors are clearly of great importance in the coping process, as by definition coping is characterised as a response to a stressful situation. In burnout research, numerous environmental demands and resources have been

described and how people cope with these demands and make use of resources has been explored in some detail. For example, the presence of supportive colleagues and supervisors has been found to relate to help-seeking and active problem-solving approaches being employed (Etzion, 1984). Other environmental factors found to relate to the use of positive and active approaches include employee autonomy and participation in decision-making. Employees with high levels of role clarity have been found to be more likely to engage in problem-solving coping strategies (Boyd, Lewin & Sager, 2009). Those individuals who are not in possession of these environmental resources are more likely to employ passive strategies like avoidance, withdrawal and resignation. These approaches are less likely to resolve the situation and individuals who engage in them are thus more likely to suffer from stress and emotional exhaustion (Ito & Brotheridge, 2003).

Personal characteristics also play an important role in the type of coping strategies employed by individuals. In particular, personality traits, and self-efficacy beliefs have been found to influence coping (Kammeyer-Mueller et al., 2009). Research on the 'Big Five' personality traits has found that each predicts differential use of the various problem-focused and emotion-focused strategies. For example, neuroticism has been found to predict emotion-focused approaches such as avoidance and venting, and has been found to negatively predict problem-focused coping such as planning (O'Brien & DeLongis, 1996; Watson & Hubbard, 1996). Extraversion predicts problem-focused strategies such as rational action (McCrae & Costa, 1986; Watson & Hubbard, 1996), and negatively predicts emotion-focused coping such as accepting responsibility (O'Brien & DeLongis, 1996).

Openness and agreeableness have been found to positively relate to active coping and social support-seeking respectively (Penley & Tomaka, 2002). Openness and agreeableness have been found to have differential relationships with passive acceptance coping, with openness negatively associated with passive acceptance and agreeableness positively associated. Finally, conscientiousness has been found to negatively predict emotion-focused coping, particularly avoidance and substance use, and has been found to positively predict problem-focused coping such as direct action and planning (O'Brien & DeLongis, 1996; Watson & Hubbard, 1996).

Self-efficacy refers to an individual's beliefs about their abilities and control within a specific domain (e.g. the work domain). Those individuals with high level of self-efficacy within a given domain believe they can execute the actions required to be successful in that domain. Self-efficacy is related to a range of work-related constructs (as outlined earlier), including the type of coping strategies employed when faced with occupational stressors. Specifically, self-efficacy has been found to positively predict the use of problem-focused coping and to negatively predict emotion-focused coping (Boyd et al., 2009). Self-efficacy is one of the constituent traits of the higher-order construct of Core Self-Evaluations (Judge et al., 2003) along with self-esteem, locus of control and emotional stability. Recent research has suggested that Core Self-Evaluations (CSE) have an important influence on coping. A meta-analysis of 81 studies found that individuals with high CSE tend to use less avoidance coping, somewhat less emotion-focused coping, and more problem-solving coping than individuals with low CSE scores (Kammeyer-Mueller et al., 2009).

In addition to environmental and personality factors, demographic characteristics have also been found to relate to coping style. Sex appears to influence coping styles and it has been suggested that men tend to use more problem-focused coping while women are more likely to use emotion-focused coping (Beasley et al., 2003; Miller & Kirsch, 1987). The influence of social roles and norms has been proposed as an explanation for this difference. Matud's (2004) study of the coping strategies employed by 1,566 women and 1,250 men and found small but statistically significant differences. Women scored significantly higher than men in emotional and avoidance coping styles, while scoring lower in rational and detachment coping styles.

The relationship between age and coping styles is a source of some debate. Findings have generally been mixed, with Aldwin, Sutton and Lachman (1996) suggesting that any differences between younger and older people are slight if not negligible. However, others have found significant differences in coping depending on age (e.g. Folkman, Lazarus, Pimley & Novacek, 1987), with younger people using more active, problem-focused coping in comparison to older people who tend to use more passive, emotion-focused strategies.

Overall, the impact of various demographic, personality and environmental factors on coping strategies is relatively well understood. However, it is evident that some debate remains regarding the precise nature of some of these relationships. The current study will attempt to contribute to understanding in these areas by examining the specific coping experiences of a sample of teachers. Previous research on coping in teachers will be presented in the next section.



## 5.2 Teacher Coping Resources and Strategies

Numerous studies have assessed the importance of supportive coping resources and specific coping strategies in the experience of stress and burnout in teachers. As a result, a number of beneficial coping resources and coping strategies have been identified. In addition, a number of factors that influence the styles of coping employed by individual teachers have been identified.

A study conducted by Mearns and Cain (2003) in a sample of American teachers assessed the relationships between coping strategies and burnout dimensions. A significant positive correlation was found between problem-solving coping and personal accomplishment. However, in contrast to findings in numerous previous studies, no correlation was found between active coping and emotional exhaustion or depersonalisation. Emotion-focused coping was found to be positively correlated with emotional exhaustion. Finally, avoidance coping was significantly correlated with emotional exhaustion and negatively correlated with personal accomplishment.

A recent meta-analysis of 65 studies of coping, stress and burnout in teachers provided further information on the relative effectiveness of various coping strategies (Montgomery & Rupp, 2005). In the analysis coping was categorised as active or passive. Active coping had a moderate negative mean correlation with burnout ( $r = -.27$ ). Passive coping was found to have a weak positive mean correlation with burnout ( $r = .09$ ). Analysis further suggested that personality and environmental variables have a stronger correlation with coping style than background variables (i.e. demographic factors). Findings suggest that

the personal and environmental resources available to an individual have a stronger influence on the type of coping strategies individual teachers employ than demographic factors such as age and sex.

Blase (1982) defined coping resources as any factor (physical, psychological, social, or material) which helps individual teachers overcome job-related stressors and achieve valued outcomes with students. Betoret (2009) assessed the impact of personal coping resources (self-efficacy) and environmental resources (both material and social) on teachers' experience of burnout and found that self-efficacy was a particularly significant negative predictor of experienced stress and ultimately burnout. While the importance of environmental coping resources was not significant in Betoret's study, others have found that environmental resources such as the presence of social support from colleagues and supervisors to be important in helping teachers cope with the stresses of their work (e.g. Greenglass, Fiksenbaum & Burke, 1996; Kerr et al., 2011).

In terms of the personal predictors of coping, sense of control over emotions has been found to mediate the stress-burnout relationship as those who believe they are able to regulate negative moods tend to employ adaptive active coping strategies, and as a result experience lower levels of burnout and distress (Mearns and Cain, 2003). The characteristic of perfectionism has also been found to have a relationship with coping strategies and stress outcomes in teachers (Stoeber & Rennert, 2008). Striving for perfection was positively related to challenge appraisals and active coping and inversely to threat and loss appraisals, avoidant coping, and burnout.

Overall, it appears that environmental and personal factors are important in influencing how teachers cope with stress, as is the case for other occupations. The specific strategies employed in dealing with occupational stress also play an important role in teacher burnout, though the evidence is somewhat mixed. The current study should provide further insight into the relationship between personal and environmental factors, coping strategies and resources, and burnout in teachers.

### 5.3 Summary of Coping Literature

Coping is a very important facet of the stress development process that can potentially influence whether or not an individual will become burned out. As Lazarus and Folkman (1984) explained, those individuals who are equipped with adequate coping resources and strategies are protected against the negative effects of experiencing prolonged job stress. Research on the mechanisms of coping has helped identify numerous resources, both environmental and personal, and coping strategies that can influence how an individual deals with stress. This is particularly useful information for those intending to create interventions aimed at improving employee resilience and reaction to stressful events.

In relation to coping strategies, the general categorisations of problem-focused and emotion-focused approaches (Folkman & Lazarus, 1985) has provided a useful framework for organising the many different types of coping strategies people employ. Carver and colleagues (1989) espoused a more detailed approach of describing specific strategies such as planning, acceptance and behavioural disengagement as represented in the COPE instrument. While there has been some debate on conceptualising coping approaches, the two major schools of thought appear largely compatible with each other.

More recently, coping research has focused on identifying the personal and environmental factors that influence how individuals cope with stress.

Environmental coping resources including support from colleagues, autonomy, empowerment and role clarity have all been found to predict the use of problem-solving approaches to coping, while the absence of these resources tends to predict

more passive and emotion-focused styles of coping. Personality traits have also been found to predict coping strategies, with highly neurotic people tending to employ emotion-focused strategies like avoidance and venting. Self-efficacy has repeatedly been identified as an important personal coping resource that predicts problem-focused coping. Recent research has also shown the importance of core self-evaluations in coping, as those with high CSE tend to use more adaptive coping styles. Sex and age may also play a role in coping, though the evidence remains inconclusive.

Research specific to teachers has demonstrated that the challenges and resources encountered at work may influence how individuals cope with stress. For example, research by Betoret (2009) and others has helped identify some important coping resources that may help teachers in dealing with the stresses of their work such as colleague support and adequate material resources. The current research aims to build on this research while specifically assessing the experiences of a sample of Irish teachers. It is intended to identify the specific coping resources experienced, and strategies employed by this sample in dealing with the challenges that they face.

## **6. Demographic Factors**

As discussed previously in discussing the role of individual differences in burnout, every employee brings their own unique qualities to the work setting.

Characteristics such as personality traits and self-evaluations have been found to play an important role in how individuals view their workplace and in turn on the development of stress and burnout. In addition, the impact of demographic factors (age, sex, etc.) on burnout has been a focus of research interest. Studies of burnout have also examined the role of factors such as level of education, marital status and work-family interference amongst others.

Though demographic factors have not always been taken into account in studies of burnout, numerous papers have explored their impact (Schaufeli & Buunk, 2003). This chapter will evaluate the extant literature on the role of demographic and other factors in relation to burnout. Previous research conducted with teachers on these variables will be presented and discussed. Implications for the current study will be outlined.

### **6.1 Age and Burnout**

A review of burnout and its correlates by Maslach and colleagues (2001) suggested that younger workers were more likely to report high levels of burnout. However, it was noted that such a finding should be viewed with caution because of the problem of survival bias—i.e. those who burn out early in their careers are likely to

quit their jobs, leaving behind the survivors who consequently exhibit lower levels of burnout. However, contrasting findings in Europe have suggested that older employees are more likely to burn out (Schaufeli & Buunk, 2003). Thus there exists some confusion regarding the precise role of age and experience in burnout.

A meta-analysis by Brewer and Shapard (2004) of 34 studies aimed to address the confusion regarding the role of age in burnout by examining correlations between age, years of experience and emotional exhaustion. It was found that age had a small but significant negative correlation ( $r = -0.14$ ) with emotional exhaustion, i.e. older employees reported lower emotional exhaustion scores. The authors suggested that this difference could be down to survival bias or possibly due to development of improved coping mechanisms over time. However, as discussed in the previous chapter, the evidence for improved coping in older people is mixed.

A number of studies involving teachers were included in Brewer and Shapard's meta-analysis and results for these studies supported the overall finding of a significant negative correlation between age and emotional exhaustion. In addition, several studies not included in the meta-analysis have supported Brewer and Shapard's findings. For example, a study of burnout in Chinese teachers found that age and years of experience had a significant, negative correlation ( $r = -0.19$  and  $-0.17$  respectively) with emotional exhaustion (Tang, Au, Schwarzer & Schmitz, 2001). No significant relationship was found with depersonalisation or personal accomplishment. However, in a follow-up study conducted 6 months later, no significant relationship between age and burnout was found. Studies by Cano-

Garcia and colleagues (2005) and Kokkinos (2006) also failed to find any significant age-related difference in teacher burnout scores.

Evidently there is a lack of clarity in relation to the role of age and experience in burnout. Findings in relation to teachers have been mixed, though Brewer and Shapard's (2004) meta-analysis does suggest that younger teachers are more likely to report higher levels of emotional exhaustion. This finding is particularly relevant in Ireland where the most recent figures on the age-breakdown of teachers suggest that Ireland has a higher percentage of younger teachers than OECD and EU averages. Specifically, 23% of Irish teachers are under 30 years of age in comparison to 14% and 13.1% in OECD and EU countries respectively (OECD, 2012). The current research will explore potential links between age and burnout in an Irish sample.

## **6.2 Gender and Burnout**

The role of employee sex in burnout has been extensively researched. While initial studies suggested females were more likely to experience burnout, it is generally accepted now that sex is not a strong predictor of burnout (Schaufeli & Buunk, 2003). However, a small but significant difference in depersonalisation has consistently been found, with males tending to have higher scores than females (Maslach et al., 2001). It has been suggested that this finding is due to differences in the types of occupational roles occupied by males and females.



In research specific to teachers, findings on sex and burnout have been equally mixed, with some studies finding differences and others failing to do so. For example, a recent Australian study found that sex was a significant predictor of both depersonalisation and personal accomplishment, with males reporting significantly lower scores than females for both dimensions. No significant differences were found between male and female teachers for emotional exhaustion (McCormick & Barnett, 2011). In contrast, a Canadian study found that females reported higher levels of depersonalisation than male teachers and no other significant relationships between sex and burnout (Fernet et al., 2012). Several other recent studies have failed to find a relationship between sex and burnout in teachers. Kokkinos' (2006) study carried out in Cyprus and Cano-Garcia and colleagues' Spanish study failed to find any significant correlations between teacher sex and burnout dimensions. In addition, Tang et al. (2001) found no significant relationships amongst a sample of Chinese teachers.

Overall, the evidence on links between sex and burnout is very mixed. While there is a general view that males are possibly more likely to report higher levels of depersonalisation, this finding has not been supported by a number of relatively large-scale studies. The current study will explore potential relationships between sex and the dimensions of burnout in Irish teachers.

### **6.3 Summary of Demographic Factors**

The individual characteristics of every employee play a role in influencing their experiences in the workplace. While personality factors have been discussed in detail in previous chapters, demographic and background factors may also shape an individual's interaction with their workplace and as a result their experience of stress and burnout. While a range of demographic factors have been examined in relation to burnout, age and sex are unsurprisingly the most commonly assessed. While the evidence is inconclusive, it appears that age and sex may both have some relationship with burnout. Specifically, it appears that younger employees may be prone to higher levels of burnout and males may be more prone to depersonalisation.

A number of possible explanations have been posited for these findings. In relation to the finding that younger employees are more likely to suffer burnout than older workers, it has been suggested that either coping abilities improve over time or 'survival bias' means that only resilient workers remain in their positions into older age. While there is some evidence for a difference in coping styles depending on age, it is far from conclusive. As yet the precise role of age in burnout remains somewhat unclear. Evidence on the impact of sex in burnout is similarly inconclusive but it has been suggested that males are more likely to experience depersonalisation due to the nature of the jobs they are more likely to have and the roles within those jobs. In addition, there is some evidence to suggest that males and females tend to employ different coping strategies which may help account for any differences in levels of burnout.

Research specific to teachers has reflected the general findings on age and sex and results have been quite mixed. Numerous studies have failed to find any significant influence of demographic factors on burnout while others have found notable differences on sex and age lines. The current study will explore potential relationships between age, sex and the dimensions of burnout in a sample of Irish teachers.

## **7. Burnout and Health**

While the negative psychological and organisational consequences of prolonged work stress and burnout have been explored in detail, relatively little research has been undertaken to investigate the potential consequences for the health of individuals affected. Nevertheless, there is growing evidence that experiencing prolonged work stress can have serious detrimental effects on employee health. Burnout has been linked to a number of serious health problems including insomnia, chronic fatigue, musculoskeletal pain and cardiovascular disease amongst others (Nixon, Mazzola, Bauer, Krueger & Spector, 2011).

The pathway by which the experience of stress can affect health is relatively well understood. Stressors are environmental conditions or situations that elicit an emotional response such as anxiety, with corresponding biological reactions (Spector, 1998). Unsuccessful coping with these stressors can lead to strains, which can be physical, psychological, or behavioural (Jex & Beehr, 1991). Occupational stressors have been found to be related to specific physical symptoms in both cross-sectional and longitudinal studies (Nixon et al, 2011). Recent evidence has suggested that stressors and strains may have a reciprocal relationship in some circumstances, with stressors and health problems feeding into and complementing each other (Shirom, Oliver & Stein, 2009). In addition, the role of personality characteristics, coping styles and various other factors in burnout and health is increasingly acknowledged (e.g. Schneiderman, Ironson & Siegel, 2005).

This chapter will explore the relationship between burnout and its negative effects on the individual affected. The biological mechanisms by which stress operates on the body will be described. Finally, the role of personal and environmental factors in this process will be discussed.

### **7.1 Job Stressors and Physical Symptoms**

Theoretical models of burnout generally explain the occupational stressor-strain relationship in terms of a stimulus-response process where job stressors (aspects of the work environment) lead to physical or psychological strains, mediated by perceptions of the environment. Examples of such models include the Transactional Model (Lazarus & Folkman, 1984) and the Job Demands-Resources Model (JD-R; Demerouti et al, 2001). Medical research has helped uncover the biological mechanisms that underlie the stressor-strain relationship and govern how we respond to stress.

The neurochemical responses of the body to stress have been extensively investigated, identifying a number of key processes. Current research suggests the hypothalamic-pituitary-adrenal (HPA) axis and sympathetic-adrenomedullary (SAM) systems are integral in the relationship between stress and health (Dienstbier, 1989; Frankenhaeuser, 1991; Taylor, 1999). These systems are involved in the release of corticosteroids, which help the body return to a neutral state after reacting to a stressor, and catecholamines, which increase pulse rate, blood pressure and other physiological reactions. Over time such reactions can result in

the experience of a number of physical symptoms including stomach distress, headache and musculoskeletal problems (Nixon et al, 2011).

Research has identified a number of job stressors that appear to predict physical symptoms. Nixon and colleagues' (2011) meta-analysis of 79 papers on the relationships between occupational stressors and physical symptoms found a number of significant correlations. Specifically, organisational constraints, role conflict, interpersonal conflict and excessive workload have been found to be strong positive predictors of physical symptoms. In addition, gastrointestinal problems and insomnia were found to relate to more occupational stressors than the other physical symptoms assessed.

Some physical symptoms have been found to have a reciprocal relationship with stress and burnout. For example, insomnia appears to both result from and contribute to burnout over time (Armon, Shirom, Shapira & Melamed, 2008). Evidence suggests that both burnout and physical exhaustion are associated with perturbation of the HPA axis, as well as elevated catecholamine levels (Armon et al.). In addition, insomnia and burnout have consistently been shown to be related to the same disease end points, further supporting the suggestion that they influence each other across time (Carney, Freedland & Jaffe, 1990). Those individuals who go into work exhausted and are then exposed to stressors may feel their coping resources are depleted, limiting their ability to handle problems. This may exacerbate feelings of mental or physical fatigue.

The relationship between the experience of occupational stressors and health is increasingly well understood. The current study aims to contribute to this

understanding by assessing relationships between stressors, burnout and health problems in Irish teachers.

## **7.2 Personality and Health**

The way in which people make inferences about themselves and the world appears to affect emotional reactions to events and judgements about life satisfaction, psychological and physical health (Tsaousis, Nikolaou, Serdaris & Judge, 2007). The important role of personality in influencing individual perceptions of work environments and the stressors they present is well established, so it is perhaps unsurprising that personality has also been linked to physical health. There is growing acceptance that personality traits and dispositions can predispose people to a variety of illnesses and diseases (Smith, 2006).

Pioneering research by Friedman & Rosenman (1959) found a link between Type A personality (i.e. competitiveness, achievement striving, hostility, etc.) and coronary heart disease. While several studies failed to replicate this finding, the concept that personality could influence health came into focus. By examining the separate facets of Type A personality, it was found that hostility was the most unhealthy characteristic of the various constituent sub-traits of Type A personality (Smith, 2006). In relation to the 'Big Five' traits, a large US study involving a carefully selected sample of over 3,000 participants found significant correlations between personality traits and health problems (Goodwin & Friedman, 2006). While no causal inferences were drawn due to the cross-sectional nature of the

study, it was found that conscientiousness and neuroticism significantly correlated with aspects of health. Specifically, conscientiousness was negatively correlated with both mental and physical health problems while neuroticism was positively correlated with mental and physical health issues. Recent research has also found that Core Self-Evaluations predicts physical as well as psychological health (Tsaousis et al, 2007).

Thus it appears that dispositional factors including personality traits play an important role in physical and psychological health. The relationship between personality and health may be mediated by individual perceptions of the environment and the sources of distress. For example, highly neurotic employees are more likely to perceive their environment negatively and as a result are more likely to experience physical and psychological strain. Once again the importance of the interaction between personality and environment in predicting work-related outcomes such as burnout and wellbeing is highlighted.

### **7.3 Burnout and Health in Teachers**

Research specific to teachers has largely mirrored the findings for other professions, with research suggesting that work environment factors and personal factors contribute to burnout and ill-health. Much of the early research assessing links between teacher burnout and health was cross-sectional rendering the establishment of causal links very difficult. Guglielmi and Tatrow (1998) in a review of studies on the relationships between teacher stress and burnout argued strongly



that more longitudinal studies were required to gain clear understanding of the pathways between burnout and health problems. Such work is particularly important for those wishing to develop effective interventions against health problems resulting from stress.

In response to this call, a number of longitudinal studies of the predictors of ill-health in teachers have been carried out. One such study carried out with a sample of 269 Chinese teachers found that younger, less experienced teachers were more likely to suffer from burnout, this relationship was mediated by self-efficacy and proactive attitudes (Tang, Au, Schwarzer & Schmitz, 2001). In turn, those teachers with elevated levels of burnout were more likely to develop mental health problems over a 6 month period. In a similar study of Israeli teachers, it was found that work-related stressors at the start of the school year predicted somatic complaints at the end of the year, with burnout having a reciprocal relationship with some stressors (Shirom, Oliver & Stein, 2009).

It is evident that job stress predicts ill health in teachers, though more work is required to clarify the precise nature of these relationships. The current research, while cross-sectional in nature, will explore the links between stressors, burnout and health.

#### **7.4 Summary of Burnout and Health**

Clearly personality, environmental stressors, coping and burnout are important predictors of physical and psychological health. A variety of serious conditions become significantly more likely to occur in those individuals who perceive their work environment as threatening and who lack the necessary resources to cope with the resultant feelings of stress. There is also evidence to suggest that health problems resulting from prolonged job stress can exacerbate the original problems and feed back into a cycle that will likely lead to serious health problems and reduced work performance.

With clear understanding of the negative stress-health process it will be possible to create appropriate interventions to prevent manageable stress from developing into serious negative health outcomes including insomnia, fatigue, cardiovascular problems etc. Greater understanding of the interaction between stress and health will shape the creation of effective interventions to counteract the worst effects of job stress on ill health and vice versa. The current study will assess potential links between burnout and health in an Irish sample of teachers.

## **8. Summary of Literature and Hypotheses**

The literature presented has explored in detail the nature of burnout, the various factors that contribute to its development, and the potential health consequences for those individuals affected. Chapters have individually discussed research findings on the role of individual differences, work environment, coping, demographics and analysed the specific relationships these factors have with burnout. Based on the literature presented, a number of hypotheses have been developed.

A focus group study will be conducted to explore teacher experiences related to burnout and inform the selection of relevant instruments to be used in the later survey phase of study. As the focus group study constitutes an important precursor to the survey study, the method and results of this qualitative phase of study are presented before those of the survey. The hypotheses outlined below will be tested in the survey study.

### **8.1 Individual Differences**

A number of associations between individual differences variables including personality traits, self-efficacy and core self-evaluations have been identified in the literature. Based on the research evidence, the following hypotheses will be tested:

- a) Emotional exhaustion will be positively predicted by neuroticism and negatively predicted by extraversion, core self-evaluations and teacher self-efficacy.

- b) Depersonalisation will be positively predicted by neuroticism and negatively predicted by conscientiousness, extraversion, core self-evaluations and teacher self-efficacy.
- c) Personal accomplishment will be positively predicted by conscientiousness, extraversion, core self-evaluations and teacher self-efficacy. It will be negatively predicted by neuroticism.

## **8.2 Work Environment**

A review of the research evidence suggests probable associations between work environment factors and the three burnout dimensions. Both school and classroom level factors have been found to relate to each dimension of burnout in teachers. Specific hypotheses are presented below.

- a) Emotional exhaustion will be negatively predicted by school-level factors including staff consensus and affiliation, involvement in decision-making and relations with supervisors. Those with positive scores on these factors will report lower emotional exhaustion.
- b) Emotional exhaustion will also be predicted by classroom-level factors such as student behaviour, motivation to work and interactions. Participants with positive perceptions of these factors will report lower emotional exhaustion.
- c) Depersonalisation will be negatively predicted by school-level factors including staff consensus and affiliation, involvement in decision-making and

relations with supervisors. Those with positive scores on these factors will report lower depersonalisation.

- d) Depersonalisation will also be predicted by classroom-level factors such as student behaviour, motivation to work and interactions. Participants with positive perceptions of these factors will report lower depersonalisation.
- e) Personal accomplishment will be particularly associated with classroom climate and teacher-student relationships. Participants with positive perceptions of these factors will report higher personal accomplishment.

### **8.3 Coping**

Coping has been identified as an important process in the development of burnout.

A review of the research evidence suggests that specific coping strategies may predict burnout. Specific hypotheses to be tested are presented below.

- a) Emotional exhaustion will be positively predicted by substance use and avoidance/emotion-focused coping strategies. Problem-solving and active coping strategies will negatively predict emotional exhaustion.
- b) Depersonalisation will be positively predicted by substance use and avoidance/emotion-focused coping strategies. Problem-solving and active coping strategies will negatively predict depersonalisation.
- c) Personal accomplishment will be positively predicted by problem-solving and active coping strategies.

#### **8.4 Demographic Factors**

While the role of demographic factors such as age and sex in burnout is a subject of debate in the literature, a number of studies suggest that there are significant links.

Specific hypotheses in relation to demographic factors and burnout are as follows:

- a) Emotional exhaustion will be negatively predicted by age and years of experience, i.e. older participants will report lower emotional exhaustion.
- b) Depersonalisation scores will be significantly higher in male participants than in females.

## **9. Focus Group Study Methodology**

### **9.1 Focus groups**

This qualitative study employed focus groups to gather data from participants. The focus group is a discussion-based group interview focused on a particular topic of interest (Millward, 1995). As a research method focus groups are generally not suited to formal testing of hypotheses in the traditional hypothetico-deductive sense. Instead, focus groups are used in research to examine peoples' experiences, opinions or attitudes around the issue of interest to the researcher (Kitzinger, 1995). The use of focus groups is growing in popularity among social science researchers as it is an effective way of gathering large volumes of qualitative data in a manner that is less time-intensive than the traditional face to face interview method (Shaha, Wenzel & Hill, 2011).

Despite its growing popularity among researchers in the social sciences, focus groups were originally developed by professionals in the fields of marketing and advertising who wished to gain an insight into consumer perceptions and interests around specific products and issues (Vaughan, Schumm & Sinagub, 1996). The focus group began to be used in social science research in the late 1980s and has since become a widely used method of qualitative enquiry (Millward, 1995). Psychologists have refined and adapted focus groups for a variety of uses to the point where they are used as the primary data collection method in a number of studies (Robson, 2002). Focus groups may also be used in conjunction with other

methods such as questionnaires, as in this case (e.g. Sloan, 1999); as a precursor to the development of a structured survey instrument (e.g. Gillespie, Walsh, Winefield, Dua & Stough, 2001); or to aid in the interpretation of survey findings (e.g. Evason & Whittington, 1997).

The group dynamic influences the type of information yielded by focus groups, indeed some researchers focus specifically on the group dynamic and how this influences the interactions that take place within the group (Millward, 1995). However, in the current study the aim is to examine the content of the participant discussions and how this provides an insight into the experiences, attitudes and opinions of the participants. Kitzing (1995) argues that the group process is more effective in gathering qualitative data than one to one interviews as it allows participants to expand upon and clarify their views in ways not as accessible in interviews. In addition the group dynamic may be less intimidating for participants when compared with interviews, as participants often provide mutual support for each other (Ho, 2006). Less inhibited members of the group help to 'break the ice' for shy participants (Kitzing, 1995). However, the group dynamic may also present a number of challenges to researchers. In some cases the establishment of group norms and presence of dominant participants can effectively silence voices of dissent within a group. In addition participants can become defensive or withhold information if they do not feel comfortable in the focus group environment (Millward, 1995). Overcoming these issues requires considerable skill on the part of focus group moderator; their ability to conduct the group effectively is fundamental to its satisfactory operation (Krueger & Casey, 2009).



The aim of the current study was to identify the factors that teachers perceived as stressful in their work and explore their feelings and opinions in relation to their experiences of stress in the course of their work. It is also intended that the information gathered is used to aid in the creation and interpretation of a questionnaire in a later phase of research. Focus groups were chosen as the method of data collection as they facilitated the gathering of large volumes of qualitative data in a relatively short space of time. The use of focus groups in conjunction with questionnaires has been established in previous research as the two methods can effectively complement each other.

## **10. Design**

The Design section will be comprised of several subsections. The first subsection will describe the characteristics of the participants. The second subsection will outline the interview schedule and discuss its formulation. The third subsection will outline the focus group procedure, detailing the setting, length of discussion, and other matters. The final subsection will discuss the method of analysis applied to the collected data.

### **10.1 Participants**

The sample in this study consisted of 20 second level teachers from 11 different schools, resident in Cork city and county. Of the 20 participants, 11 (55%) were female and nine male (45%). Participants ranged in age from 23 to 60, with teaching experience ranging from those in their first year of teaching to those about to retire after 38 years. Participants taught a wide variety of subjects and were employed in both urban and rural schools. Participants were employed in both private and public schools situated in areas with widely varying socioeconomic circumstances.

Participants were recruited with the assistance of a second level teacher. Participants were contacted directly and asked to participate in a group discussion about their experiences as a teacher. Three separate focus groups were held with

each lasting for approximately one hour. There were eight teachers in the first group and six teachers in both the second and third groups.

## **10.2 Ethics**

This study was assessed and deemed to meet ethical standards for research by the Ethics Committee of the School of Applied Psychology, UCC. Participants were provided with an information sheet and consent form explaining the purpose of the study and that it would be recorded. Participants were assured that they could withdraw from the process at any time and the information they provided would be held in the strictest confidence.

## **10.3 Interview Schedule**

The questions used to guide the focus groups were formulated having consulted the literature on teacher stress and burnout. Second level teachers were also consulted in order to ensure the relevance of the questions. Interview schedule questions were formulated in order to explore the experiences of participants in relation to their colleagues, students in their school and other aspects external to the school. Questions focused on participants' experiences in these domains and the positive and negative aspects of each. A number of prompts were developed for each question to assist in the discussion. A final question asked participants to describe their feelings about their job as a whole, i.e. their overall impression of teaching as a profession. The final interview schedule can be seen in Appendix 1.

#### **10.4 Procedure**

Participants were approached in order to take part in a study of their experiences as second level teachers in Ireland. It was explained that they would be taking part in a group discussion relating to the positive and negative aspects of their work, lasting for approximately one hour, if they chose to participate. If they agreed to participate participants were given a time and venue for a focus group. All interviews took place in a school classroom in the greater Cork city area. Three separate focus groups were held, the first in August 2011, the second in October 2011 and the final group in November, 2011. After the third focus group it was decided that 'saturation point' had been reached with data collection, i.e. participants had discussed all of the major sources of stress over the three groups and any future focus group was unlikely to yield significant new information.

Upon arrival at the focus group venue on the appointed day, participants were invited to take a seat and offered tea, coffee and biscuits. Participants introduced themselves to each other and talked informally prior to the commencement of the focus group. Once participants were all seated around the table they were provided with an information sheet and consent form explaining the purpose of the study and that it would be recorded. It was explained that participants could withdraw from the process at any time and the information they provided would be held in the strictest confidence. Once all participants indicated their consent the audio recording equipment was turned on and the focus group commenced.

The group discussions broadly followed the interview schedule though there was flexibility in the ordering of the questions depending on the direction being taken by participants in their contributions. In general discussions flowed very naturally with little need for moderation and prompting. The aim of the moderator was to facilitate discussion in an unobtrusive and subtle manner, allowing participants to shape the discussion. This was largely successful though at times it was necessary to interject in discussions to ensure that every participant was afforded an opportunity to contribute.

Once the issues in the interview schedule were covered and discussions reached a conclusion participants were thanked for their participation and the purpose of the study was again explained to them. Participants generally stayed in the room for several minutes before departing and many expressed enthusiasm for the study and felt their participation was worthwhile.

### **10.5 Approach to Analysis**

Thematic analysis was employed in order to analyse the data gathered in the focus groups. Thematic analysis is a widely used qualitative analytic method within psychology (Roulston, 2001). It is used for identifying, analysing and reporting themes within data (Braun & Clarke, 2006). In the past, thematic analysis has attracted criticism as an analytic method due to its broad nature (e.g. Boyatzis, 1998). However, more recently Braun and Clarke have produced clear guidelines on the correct operation and application of thematic analysis in psychological research.

This section will outline the assumptions underpinning the current analysis and the steps taken in generating themes from the data.

Thematic analysis was chosen as the method of analysis as it allows for the distillation of large volumes of qualitative data into representative themes while maintaining the richness of the original contributions (Braun & Clarke, 2006). Themes may be defined as a patterned response within the data set that captures something important in relation to the research question (Braun & Clarke). In the current analysis, themes were identified in an inductive or 'bottom-up' way. An inductive approach means the themes identified are strongly linked with the data themselves (Patton, 1990). Inductive thematic analysis is driven by the data, rather than attempting to fit the data to the analyst's preconceptions. This is consistent with an essentialist/realist epistemology, whereby experience and meaning are viewed as directly related to language, i.e. language reflects and enables us to articulate meaning and experience (Potter & Wetherell, 1987).

The analytic process described by Braun and Clarke (2006) was followed in the current analysis. Having transcribed the audio recording of the focus group sessions, the transcripts were read several times in order to become immersed in the data. Throughout this process, notes on potential themes and emerging ideas were taken. These notes helped inform the next stage of analysis – formal coding of the data. Codes identify a feature of the data that is interesting to the analyst and are the first step in attempting to define what the data means (Charmaz, 2006). Coding helps organise data into meaningful groups which greatly aids the formulation of themes later in the analysis process. It is a systematic process which

involves working systematically through the whole data set, giving full and equal attention to each data item. An example of coding is presented below.

Data extract	Code
I would say there's definitely a big issue around hours and stuff because the school I was in last year [pause] one teacher got hours taken away you know 4 or 5 hours were given to another teacher and it just caused an ugly kind of rancid atmosphere inside there like.	Competition among staff Limited hours Creating resentment

**Figure 1.** Data extract from thematic analysis.

The next phase of the analysis was the search for themes. The first step in this process involved collating every code into a list and grouping together codes that were deemed to be related. This facilitates the comparison of various codes and how they may combine to form potential themes (Braun & Clarke, 2006). A list of candidate themes was created which then underwent a review process in order to refine them and ensure their robustness. At this point a number of potential themes were merged, while some were discarded due to a lack of data to support them. Ensuring that the themes 'work' with the data is of great importance, the thematic map must reflect the meanings in the data set as a whole. Once the themes were finalised and the data extracts supporting them were collated it was possible to begin writing up the analysis. The aim of the write up in thematic analysis is to tell the story of the data in a concise, coherent and interesting manner that demonstrates the importance of the analysis. The final thematic analysis of the data is presented in the following section.

## 11. Focus Group Results

Thematic analysis of the focus group data was performed in order to identify the issues teachers perceived as stressful and explore their feelings and opinions in relation to their experiences of stress in the course of their work. In the current report the stressors identified in the analysis have been organised under the following headings: Colleagues and Management; Classroom and Students; Parents, Public and Media; Personal, Demographic and Other factors. These categories will be explored in detail below.

### *Colleagues and Management*

Perhaps the most commonly cited source of stress amongst focus group participants was problematic relations with the principal and other teachers within their school. A variety of issues in relation to colleagues and management were discussed at length by participants and the extent to which these issues were seen as stressful was noteworthy.

#### *Role of school management*

The school principal and other members of the school management team were described by many participants as having a very important role in shaping the



working atmosphere within the school. In many cases the principal's dealings with staff were a great source of stress and division amongst the teaching staff.

PG: *One school I was in a few years ago the principal was quite difficult and it led to immense tension throughout the staff.*  
*(35 – 37) FG 2*

LOB: *I would agree with that and it would have been my experience for a good number of years. The principal is very important to the working atmosphere that's going on in the school in staffroom management in particular; even between staff it can create divisions within the staff. The situation has changed in recent years, it's the same staff, it's the same facilities, same physical environment but the tension has very much disappeared almost. (35 – 42) FG 2*

In the above excerpt LOB describes how a change of principal virtually transformed the atmosphere within the school's staffroom. In this case the negative atmosphere created by the principal had a knock-on effect amongst staff, fostering tension and ultimately divisions in the staff room. Other participants also described the negative impact of working with 'difficult' principals, reinforcing the idea that the principal plays a crucial role in governing the working atmosphere.

TB: *The fact is that management set the tone for the school and I've been in a lot of schools and if management are very serious and professional it peters down. If the management*

*aren't professional and they're gossips, it peters down. (52 – 54) FG 1*

It's clear that some participants perceive the principal as 'setting the tone' for a school and several alluded to the divisions fostered in the staff room by 'difficult' principals. These divisions were elaborated upon in the focus group discussions and a number of specific issues were highlighted by participants.

#### *Favouritism and staff room politics*

Perhaps the most extensively discussed issue in relation to the principal's influence on school staff was that of favouritism and politics within the staff room.

Participants described cases where the principal or vice-principal were seen to favour an individual or group over others on the staff, and this resulted in resentment and divisions among teachers within affected schools.

BOB: *Management's inconsistency and treating people differently I find that very stressful. They promise me something and I never get it whereas the person sitting beside me will get it because she drinks with her [the principal] or she visits her house. (115 – 119) FG 1*

Other participants echoed BOB's views that management favoured certain groups within the staff room in their schools, and it was clearly a source of great frustration.

TB: *It was shocking to me to go to schools where certain people knew certain things before we were consulted and I was going 'not professional'. (134 – 135) FG 1*

BOB went on to describe how she eventually resigned her post in the school due to the perceived lack of fairness she experienced. The fact that an experienced teacher was driven to resign a permanent, full-time position demonstrates the level of frustration that inconsistent management can generate among teachers.

While the role of management in staff room politics is notable, it is clear that 'ordinary' staff members are also involved in this potentially disruptive process. Focus group discussions suggest that there are individuals and groups of teachers who 'cosy up' to school management in order to influence decision-making in their favour.

EG: *And just in terms of management it plays a huge role in how effective management are in pulling things along and being able to see where you're going with something and everyone has an opportunity to have a say. If management aren't strong then you know groups can be very unhappy and if one group y'know seem to have the say that can cause a lot of stress. (63 – 66) FG 3*

As EG describes, powerful cliques within the staff room can have an influence on the decision-making process within a school. A principal or vice-principal who is seen as weak may be more susceptible to influence by groups within the staff room.

LF: *We had a thing in our staff as well y'know where our vice-principal was surrounded by a cohort of people who seemed to have more power and influence and when they said something it happened. (73 – 75) FG3*

The presence of these cliques and staffroom politics were almost taken for granted by participants though the extent to which this was seen as stressful varied.

DK: *There's politics everywhere, but I've been in places where politics has manifested itself in a dirty...blister like that's caused hurt and tears and everything else. (105 – 106) FG 2*

Ultimately it appears that politics and influence are an unavoidable part of life in the staff room. However, the extent to which it is stressful to individual teachers appears to depend on several factors. The principal and vice-principal play an important role in shaping the working atmosphere, as well as groups of teachers who may seek to gain a position of influence within this environment. Finally, it is down to each individual teacher to cope with the impact of these political machinations.

MH: *But there's a lot of different levels of politics really in the staffroom. I mean as regards the relationship that some staff have with management and others don't and yeah but I*

*suppose you just have to get on with it don't you? I mean  
you have to try and not let it get to you. (78 – 82) FG 2*

MH's view that 'you just have to get on with it' was widely repeated by other participants. Politics and favouritism appear to be an unfortunate fact of life in Irish secondary schools, though the extent to which it is stressful to individuals appears to vary. Relationships with school management and colleagues were often cited as a source of friction and the feeling of powerlessness that accompanied being 'out of the loop' in decision-making was very difficult to take for a number of participants, particularly BOB.

#### *Staffroom 'bitching' and relations with colleagues*

While the previous section examined problematic relationships with school management, this section will explore the related issue of staff room 'bitching' between colleagues. Participants described the difficulty they experienced due to inter-personal problems with their colleagues and it appeared to be quite a common issue, though again the extent to which it is seen as stressful appears to vary.

TB: *What you'd love is another room besides the staff room to  
go to...another environment where you can just sit there  
and, I don't know, just stay out of the bitching of the  
staffroom or something but it's impossible to get it. (55 – 58)*

*FG 1*

TB raises an interesting point, and one mentioned by other participants, namely the lack of an alternative to the staff room. In many schools the staff room is the only place for teachers to have lunch, correct homework, prepare for classes and socialise with colleagues. The presence of a large number of teachers doing different things in what is often a small room can lead to numerous problems. Participants described the stress of sharing a space with colleagues who they don't get along with and dealing with cliques within the staff room.

DK: *But if you're going into school and you're worried about who to talk to, who not to talk to, that's the first thing you're thinking about when you get up in the morning. It does impact on you and how you feel about your job, definitely. Or you're trying to avoid somebody and I feel like I'm too old to be arguing with people, you know I don't need it. Every day because we spend a lot of time, we spend more time with people we work with than in our relationships, I mean amm [laughter]. (153 – 158) FG 2*

DK describes a sense of dread and inevitability that can hang over a staff room, it's impossible to avoid meeting disliked colleagues. Most participants agreed that a certain amount of trouble was unavoidable within the staff room and one participant characterised it as "a delicate place" that can be "a bit scary sometimes" due to potential arguments. This experience was repeated by participants of all ages, however younger participants in particular found the staff room to be a very

daunting place. Negotiating the established order and 'finding a place' within the staff room was seen as particularly stressful.

PG: *Teachers in my experience tend to try to define their own territory like in the staffroom. (98 – 99) FG 2*

Essentially it appears that within the staff room teachers and groups physically claim 'their own territory' by sitting in the same place with the same people every day. Thus for uninitiated teachers entering the staff room it is important to both establish relationships with others but also find an area within to staff room to base themselves.

MM: *I've been to a few different schools and it's a scary experience the initial going in like. Trying to go in there and just not knowing where you can sit, am I taking someone's spot or am I sitting where I shouldn't be? (18 – 21) FG 3*

GL: *Like when you come in you think everything's fine but obviously there are groups, there are groups in every staffroom but it's just going to take time to see what's happening. (29 – 30) FG 3*

It is clear that the staff room can be a tricky place to negotiate, particularly for younger teachers. However, older participants described how staff room squabbles no longer concerned them.

BOL: *I think it's, I think it's an age thing as well because when you start off in the staffroom you make a point of trying to know people and then you get to a certain age and people come in and you say I couldn't care less one way or the other. (36 – 38) FG 3*

LF: *I think there's a confidence that comes with age. I think you know when you're younger you really do feel you need to prove yourself. (114 – 115) FG 3*

As noted earlier, many believed that staff room 'bitching' was an unavoidable fact of teaching life and just something to be dealt with. While some found it particularly difficult to deal with, others suggested that it was a matter of personal choice whether individuals became involved or not.

SM: *I'm going to be meeting these people every single day, more than my own family and if I don't make an effort to get on with them and to be respectful and friendly and...work with these people I'm making life very difficult for myself, I'm going to have a miserable 30 years ahead of me. You know so I think you know maybe it's in yourself to make the best of the situation, the best of the facilities, the best of the people you're teaching, the best of the management. (16 – 27) FG 1*



It appears that friction and problematic relations between school staff are present in almost every school. The extent to which it is stressful to individual teachers appears to depend on several factors including the stage of their career and whether or not they're willing to 'get on with it'.

### *Sex differences and balance*

Somewhat surprisingly several participants, both male and female, also described the importance of sex balance within the staff room – many felt that having a mixture of male and female teachers was beneficial to the working atmosphere.

BOB: *I, I've taught in 4 different schools...but amm there has been staffrooms with imbalance I think is is... a big problem, all men or all women. (89 – 92) FG 1*

Participants noted a number of differences between male and female staff, particularly in relation to how they interact with colleagues. Female teachers were perceived as 'sensitive' while males were seen as 'raw'. It was widely held by both male and female participants that having a mixture of male and female staff in a school essentially curbed the more extreme masculine and feminine traits and resulted in a more balanced atmosphere in the staff room.

DK: *It's great to have a mix of staff...men and women in the staffroom, it's great. Men will defuse things that women will take to excess.*

PG: *I will say that, I've been in an environment where there was all male staff and there's a rawness to it, and bringing in a few females softens it out, even in language and conversation. (168 – 172) FG 2*

It is clear from what DK (female) and PG (male) have said that a sex balance in the staff room is seen as beneficial across the board. Female participants in particular felt that balance was important. It appears that schools in which the staff are predominantly female have a comparatively tense working atmosphere. This is evident in the discussion below in which all contributors besides SF are female.

EG: *Something we touched on earlier you know about y'know stress, I do think it can be immensely good for a school staff to have a mix of male and female.*

GL: *Yeah I was in an all female and it can get very, very intense.*

EG: *We used to have more men but now we only have one man and it's not good because I think women see things that men would never see.*

SF: *Oh totally.*

EG: *And you know they're as well off and they bring...I just think it's the balance.*

GL: *It's the mix that's good, I think you're right.*

LF: *It just kind of calms things down, everything just becomes more normal whereas there's heightened sensitivity in the female only environment.*

MM: *It's the same in the classroom I think. When there's boys and girls it's got a lot more balance than all boys or all girls. (439 – 450) FG 3*

Thus it appears that sex balance in the staff room is widely believed to be quite important in fostering a balanced working atmosphere. This was a somewhat unexpected finding and one that warrants further investigation.

#### *Support from colleagues and management*

Despite the numerous challenges presented by colleagues and management, participants also described how they could also be a source of support and reassurance in stressful situations.

KR: *It's often great I think that let's say you think you're the only person in the school with certain issues or certain problems and then when you get to discuss them with other people you say sure that person is in the exact same situation as me. You know you kind of de-stress or you go to somebody with a situation and you know they'll say 'I'd the exact situation last week and this is what happened...' You know*

*and it really, really helps you if you can find the right people.” (186 – 191) FG 1*

The sense of being ‘in it together’ and sharing problems with others who have experienced similar issues was seen as very beneficial. Participants described how those outside, including friends and partners, didn’t understand or empathise with their work-related problems. Support from colleagues appears to be an important coping resource for teachers dealing with stressful issues and many close friendships develop among staff as a result. The following excerpt describes how dealing with a difficult classroom environment brought staff together and fostered long-term friendships.

CM: *I wouldn’t have been thrilled with management style but the staff was very supportive but you could have only survived I think because of walking into the staffroom and knowing look we’re all in this together you know, and ah you know there were days where people were crying, just crying because they couldn’t stand the place. But am then, staff were brilliant and they would still be my best friends you know. (226 – 231) FG 1*

Certainly it appears that dealing with adversity can bring teachers together. Another example of this was described by several participants who worked in schools which had recently undergone a Whole-School Evaluation. This is an external auditing process that requires teachers to submit a large amount of documentation on their teaching and potentially in-class observation by inspectors. Participants described

how taking part in this labour intensive process brought the staff together as they were able to share the burden with each other.

BB: *I would consider we get on very well, but I would say one of the things actually that did help was the whole school planning situation that we had this year, and everyone was on the same boat, getting their plans organised, organising and people were interacting, you know the subject groups were interacting faster, I think faster than they probably would have done. To me it seemed like the first month in everyone was chatting and trying to get cut and paste job, 'have you got this?', 'have you got that?' and you could ask a person in some other department 'how did you do this?' and you'd meet people and talk to them. That's, that's what happens. (75 – 82) FG 2*

LOB: *What I think about teaching generally is that you're very much on your own really, like you're in a room with a class on your own and a situation like that BB [referring to whole school evaluation] where you're working towards a common aim can help improve the relationship among staff sometimes you know. (88 – 91) FG 2*

LOB makes an interesting point about the often solitary nature of teaching. It is quite rare that teachers get an opportunity to collaborate with colleagues. Indeed teachers often have to compete with each other for resources and it is little wonder

that tensions can develop in this scenario. The above excerpts suggest that working towards a common aim is beneficial to the working environment within the school and something which individual teachers find valuable in bringing the staff room together.

School management can also be an important source of support for individual teachers. Participants described the importance of receiving praise and support from the school principal and other members of school management. Unfortunately this support is not always forthcoming, as highlighted earlier. Despite this, several participants described experiencing support from management and the positive effect it had on them.

EG: *I think sometimes you know I see managers, management who are able to say just thank you in a nice quiet way, 'well done, it was really important to the school, I noticed'. That's all, and it's so important. I think it's down to good skills and being able to manage people. – (133 – 136) FG 3*

Recognition of a job well done is a source of reassurance to teachers, though unfortunately it isn't always available. As EG mentions, good 'people skills' are very important for school management and those who possess these skills can have a positive effect on staff morale.

BOB: *There's nobody too old for praise, we all need it now and again.*

INT: *And is it something that's kind of forthcoming in the schools  
that you're in or schools that you've been in before?*

CK: *Praise?*

INT: *Yeah.*

CK: *Definitely if you do a good job on something or...*

KR: *You wouldn't get it from everybody. – (178 – 184) FG 1*

It appears that praise and support from management are important to teachers and when they are available morale can improve. While it is clear that such support is not always available, it certainly appears to be beneficial to those teachers who do receive it. As BOB says, praise and reassurance are important to teachers at all stages of their career.

### *Classroom and Students:*

Participants discussed a variety of issues in relation to their interactions with students. It was apparent from the discussions that a great deal of variation exists between classes and the students within them. Participant descriptions of their experiences in class displayed a level of ambivalence; by some the classroom is seen as a haven from staff room issues whereas others view the classroom as a challenging and stressful environment. This section will explore the various issues highlighted by participants as they described their experiences with students in the classroom.

### *Student discipline*

While participants reported a wide range of issues in relation to students and the classroom, the challenge of maintaining student discipline was cited by every participant as being particularly stressful. Participants described the frustration of wasting teaching time on disciplinary matters, attempting to teach students who refused to co-operate and the effect these problems had on them. It was clear from the focus group discussions that no two classrooms are the same and the atmosphere can vary widely depending on both the students and teachers present.

CK: *I think there's different stresses in different schools. The last place I was I think discipline would definitely have stressed me out over anything else. (540 – 541) FG 1*

Most participants echoed CK's view that there are different challenges in different schools. In particular, those participants who taught in schools in disadvantaged areas described the difficulty of maintaining discipline and motivation in their students.

CM: *I would have taught in a few different schools as well and amm I would have started with the VEC and I then moved to amm a private school and I couldn't believe that I was getting the same salary for what I was doing in one school and in the second. Like there were different pressures but it was wear and tear grind you down amm in discipline areas and I was in a very I suppose it would have been recognised*



*as a tough, tough area to be in and it was just the daily grind of all the issues that you would have in a classroom. You had guys who might be hung over or there might have been guys who'd been robbing a car the night before and guys who'd have no homework which was the least of your problems.*

*(204 – 212) FG 1*

The situation CM described is one of extreme difficulty for teachers in the school. It's clear that students are bringing a lot of 'baggage' from outside to school with them and as a result conflict develops between student and teacher in class. CM's experience of the exhaustion and 'wear and tear' that this scenario caused her clearly demonstrated that this is a very difficult teaching environment. The fact that she couldn't believe she was getting the same salary for teaching in a private school serves to demonstrate how much difference there is between schools.

CM: *Yeah, and then you'd have people that you'd spend crowd control for 20 minutes, you might teach for 10 and then I went into a system where you were teaching for 45. Exhausted from teaching after 45 minutes you know so amm. I would have thought that the actual physical wear and tear of the crowd control was dreadful really. [...] I was able to go for a walk every day when I came home from school and do the garden and everything as opposed to sit and watch the news and then be asleep by the weather forecast. (214 – 220) FG 1*

The effect of engaging in 'crowd control' with difficult students was obviously both distressing and physically exhausting. Moving schools greatly improved CM's energy levels after school as she no longer had to battle with her students and was able to spend all of her class time teaching. Other participants working in equally 'difficult' schools described similar struggles with discipline.

LOB: *In my own school, we're a DEIS school so we're very much disadvantaged socially and, not so much economically anymore, but very much socially and that creates a lot of difficulties for us in the classroom. They're bringing a lot of baggage with them, guys you know, an all male school. A guy could be just ballistic today, it has nothing to do with school, it has nothing to do with class, it has nothing to do with what you're teaching, it's what happened at home that morning or the night before or the fact he spent the previous night in the police station until 4 o'clock in the morning or something like that. That brings a lot of difficulties for us into the classroom and it's a source of tension because very often you don't find out this until you have a battle with the guy, go through the year head and finally the deputy principal finds out this is what 'twas all about and nothing to do with what he said it was about. (259 – 269) FG 2*

While the description of the student spending the night in police custody is an extreme example, it's clear that LOB and others regularly deal with students who

are deeply troubled and often bring these issues into the classroom with them.

When this occurs it appears to be almost impossible for teachers to run the class in the way that they intended. Another participant described the stress of feeling like a 'jailor' because some of her students, again in a disadvantaged area, simply did not want to be there.

Discipline was also an issue for participants teaching in schools not designated as disadvantaged.

BOL: *Another thing I found over the years in terms of frustration and stress in classrooms is when you're dealing with a very difficult group and there's one individual who you know in your heart and soul is the ring leader and he, he or she, is the cause basically of the problem, the actual structures outside the class, they can't cope with that because of the new Education Act and so on. You send them out to the principal or vice-principal and what's he going to do, he'll do X, Y or Z. That child is back smiling in front of you about three days from then and saying well, what now? (250 – 256) FG 3*

BOL's frustration at the failure of disciplinary structures in his school was echoed by many other participants. Teachers appear to have very little power to deal with problematic students who 'know the rules of the game' as one participant described it. Difficult students know they can repeatedly disrupt the class with little fear of serious repercussions. Clearly student discipline is an issue for teachers in

Ireland, however there appears to be great variation between schools. The following excerpt refers to the level of variation experienced in class by teachers.

LOB: *I think schools are not all created equally and there is no teaching job as such, every teacher's job is different and it very much depends on the school that you end up in, what type of tensions you're going to have and what type of stresses you're going to have so what's a big deal in one school is a non-event in another. (287 – 290) FG 2*

While every school is different, it's also important to bear in mind the differences between individual teachers. While some can handle indiscipline and command respect within the classroom, others struggle in this situation. Participants described the challenge of maintaining order and control of a large group of teenagers. It is apparent that not everyone possesses the qualities required to maintain order in class.

LOB: *You know the dynamic of the classroom as a social situation is different to most in that there's an element of control and in most social situations you don't have that and it brings an amount of stress into the teaching situation since it's not just teaching there's also control. Now for some people they can achieve that seemingly effortlessly, they walk in and it happens, but for other people that can be quite difficult. (378 – 382) FG 2*

There was broad agreement with LOB's statement among participants. Several others described colleagues who struggled in controlling the classroom environment. It was suggested that, regardless of the other abilities a teacher may have, if they cannot control their students and command respect they will be unable to teach successfully,

GOR: *Someone could be like extremely passionate about a particular subject but...unless you have this specific personality it's almost a waste because you can't communicate what you know unless you have these other skills that...you know you can control a class, you can make a relationship with them and all the rest of that, with staff as well. (397 – 401) FG 2*

GOR describes the different skills a teacher needs to succeed in class. Passion for the work is obviously important but communication of knowledge cannot occur without the ability to both control and form a relationship with students. This suggests teachers must successfully find a balance between being approachable to students and maintaining order. Unfortunately achieving this balance is not always possible.

LOB: *With the tools that we have, the force of your personality you're trying to control 20 or 30 people. When a cop is trying to enforce the law and he has a baton in his pocket he has something to fall back on! With the tools that we have*

*available to us it can be quite a stressful situation depending  
on the group in the situation. (392 – 396) FG 2*

It is apparent that both teachers and students play an important role in shaping the disciplinary atmosphere in class. Unfortunately it appears that in some cases maintaining order and control in class is extremely difficult and stressful for teachers. Difficult students and ineffective school disciplinary policies to deal with them were also cited as a source of great frustration by participants.

#### *Student motivation*

Related to the issue of discipline is that of student motivation. Once again participants teaching in schools designated as disadvantaged recounted difficulties in dealing with lack of motivation amongst their students. However, motivating students and dealing with those who were not motivated to learn was seen as problematic by participants teaching in every variety of school. Again it appears to be the case that no two classes and no two students are the same. Teachers experience great variation in the level of cooperation and motivation they receive from students from class to class throughout their working day. The experience of teaching disinterested and unenthusiastic students was described as frustrating and disheartening for teachers.

KR: *I come in with serious enthusiasm and it's not matched by  
the students and that alone causes serious friction you know  
because you come in bursting with energy and the students*

*don't replicate that and they don't give the effort. You're, you're trying to give them the effort and you know we all learn this thing on our Dip called intrinsic motivation where it has to come from within and unless they find it themselves there's nothing you will say or their parents will say that will motivate this child you know. (239 – 244) FG 1*

There's a sense here that teachers are often fighting a losing battle when it comes to motivating their students. No matter how enthusiastic and well-prepared the teacher is, it won't always have a positive effect on their students. This can lead to disputes with students and frustration for the teacher involved.

MM: *And you might have so much you want to get done and you only get half of it because it's so hard to get them to wake up half the time. Or like at certain times of the day they're less awake than other times. Sometimes I come back mentally exhausted because it's such a trial inside there to get them to even open the page, five of them will be on the wrong page and you waste twenty minutes just getting started. (173 – 177) FG 3*

As MM describes, dealing with a lack of motivation is particularly stressful when it prevents teachers from achieving their teaching aims within the class. This view was echoed by other participants who described having to 'coax and cajole' their students into working and the amount of time lost in the process.

GOR: *You feel like you're constantly having to dangle a carrot going like 'come on, come on it's not that bad and we'll do this or we'll do that', so it takes a lot of preparation and it puts a lot of stress on you every day to have something new for them to do to get them excited about the subject. (318 – 321) FG 2*

The participants clearly take a great interest in how their students perform and it's undoubtedly a source of frustration when students fail to engage with carefully prepared material. Participants also described the disappointment of seeing students fail to reach their full potential.

SF: *I don't know if it's exactly stressful but it's certainly frustrating that you're going in to people and you can see that they've loads of ability but no interest. (170 – 172) FG 3*

#### *Class preparation and energy*

Participants described how adequate preparation was crucial to running a class successfully and keeping students interested. Preparation is obviously important and appears to require a lot of time and effort.

JMC: *I suppose preparation for classes is the key. I suppose what's very frustrating is you are organised and you set up experiments and they all work out and it's great but the class have no interest. After 30 years of teaching you're still more*



*excited because something happened than any of the students. (557 – 560) FG 1*

It is evident that teachers spend a great deal of time preparing their classes in order that they are interesting and engaging for students. However, many noted the frustration they felt when students failed to engage during a carefully prepared class.

MM: *Yeah you've got pressure to get stuff done and it's just like they're not cooperating sometimes. Now a lot of times they do but you just have days where it's just a long trek of a day that feels like it'll never end. (182 – 184) FG 3*

Losing time designated to teaching hampers the ability of teachers to cover everything that they need to. Time pressure was cited by a number of participants as challenging. Perhaps due to this pressure some participants described how they were not always prepared for class as they felt they should be - an experience which was described as difficult.

SF: *I think what's key though is actually being on top of your subject yourself and having just a little bit of preparation done so that you know what you're doing that day. You know there were times I suppose where I wasn't prepared and I found it difficult, I find it a lot easier to have kind of an idea what exactly you're doing, it makes things so much easier. (311 – 314) FG 3*

So while it is often unacknowledged by the students and can put pressure on teachers, spending time preparing for class is extremely important.

JMC: *The minute you go in and you're not organised you're finished altogether. (565 – 566) FG 1*

Teaching was seen by participants as an 'intense' job, with every minute accounted for. The intense nature extends beyond preparing for class, with teaching itself likened to a stage performance by one participant.

EG: *You're performing on stage for 40 minutes and you'll change over for 1 minute, you'll have a little break maybe and you'll perform again. During a performance sometimes if you have a long day you'll be performing for 5 hours, whatever and you'll been on supervising the corridor during your break time y'know so it is intense, so intense for that, for those days...and you can't be missing and you can't go down to the bathroom and you can't take a bunk off which you could maybe in an office situation or y'know, you can't. (334 – 340) FG 3*

Several participants raised this issue and it was noted that teachers can't 'disappear' for a while to take a break from their work, unlike those in some other jobs. Other participants echoed EG's points, particularly in relation to the issue of working through breaks when on supervisory duty.

BOL: *I mean you could be going from 9 in the morning until 1  
o'clock without having a cup of tea if you're on for  
supervision (389 – 391) FG 3*

It is evident that participants feel that they are constantly under time pressure, whether they are preparing for class or actually teaching. Being ready for class is important, as is its smooth operation. When students fail to cooperate, teachers can potentially struggle to cover the full curriculum.

While teachers frequently receive public criticism for what is perceived as their short working day, it appears that the vast majority of a teacher's time is spent working intensely. This is clearly physically demanding and the lack of breaks appears to be a source of annoyance for some.

#### *Watching what you say in class*

The final major issue identified by participants in relation to classroom and students relates to what they say to students in class. It is clear that several participants felt somewhat wary of accusations from students due to comments they had made in the classroom. Some participants had experienced situations where comments they had made to students were misinterpreted, often leading to confrontations with parents.

DK: *I would say it's saying the right thing and the wrong thing  
and saying things that are intended to help somebody. (177  
– 178) FG 2*

DK: *That would stop me from, that would make me nervous in the classroom, that would be my number one thing to make me nervous in the classroom. (186 – 188) FG 2*

DK evidently viewed having to be careful in class as nerve-wracking. She went on to describe a confrontation with a parent over a misinterpreted comment made to a student. Other participants described similar experiences. These episodes appeared to be a very stressful for those affected, particularly for one participant who was accused of bullying one of his students.

LOC: *Just last week I was on a complaint that I was bullying a kid and I found that very stressful. I was talking to the principal about it, this kid actually I'd say you couldn't bully the kid because you couldn't think of any reason why you'd want to bully the kid but then there was a big hullabaloo over it but then this week and 'oh sure that's all forgotten about'. And I just left it at that because I didn't want to start it all up again. (192 – 196) FG 2*

LOC: *Yeah well I found it very stressful, I mean I couldn't eat. (199) FG 2*

The negative impact of the incident LOC described is quite clear. He described how the incident took place on a Friday and because of the stress he couldn't eat over the weekend. There was no opportunity for LOC to clear his name and no compensation for the level of stress he suffered. This episode suggests that

teachers have very little protection against accusations made against them in class and little chance of defending themselves against these accusations once they are made. LOC chose to move on from the incident, despite the fact that he felt he was unfairly accused, for fear of reigniting the situation.

Some of the more senior participants felt that the classroom dynamic had changed over time. It was felt by many that teachers were now more open to questioning by their students. While this was not necessarily seen as a bad thing by most participants, it was clear that some felt the shift was not entirely welcome.

BB: *Y'see the classroom environment's changed dramatically. As a teacher going back, I mean the teacher was God. It didn't matter what you said, whatever I said was right. That is not the case now, and any teacher who says that to me is just fooling themselves. (202 – 204) FG 2.*

BB's comments suggest that over time the respect commanded by teachers in class has diminished. Teachers are more open to being questioned by students and participants were somewhat ambivalent about this. While many believed teachers should be open to questioning and debate, others felt that some students pushed the boundaries too far.

GOR: *I think they use nowadays like, they know that we're way more conscious of what we say and what we do and the smart ones will use that as a kind of, you know if you give somebody a note to their parents they can give their parents*

*a different story whereas if I had gone home and said that they'd have been like 'you were wrong, get over it'. Whereas now a note will come back going 'well actually blah, blah, blah' and then this big battle takes place and it's quite stressful because y'know... (249 – 254) FG 2.*

GOR's comments suggest that some students can manipulate their parents into believing they were treated unfairly in class, leading to confrontation between the parents and the teacher involved. There is certainly a suggestion that parents are now more inclined to side with their children than teachers when their child gets in trouble. Fear of getting in a 'big battle' with parents is evidently a source of stress for some participants. A number of participants were clearly worried about issues that occur in class escalating and leading to conflict and stress outside the classroom.

#### *Classroom as 'haven'*

Despite the issues outlined above, some participants had a very positive view of their classroom experiences. Several viewed the classroom as their 'favourite place' and a haven from the occasionally fractious staff room environment. It appears that most participants felt a sense of control in the classroom, something that was often lacking in their dealings with colleagues and management.

BOB: *Back in the classroom is a grand safe haven for me, that's where I'm at my best anyway. (148 – 150) FG 1.*

LF: *The classroom's my favourite place amm, I find that it doesn't matter what's going on anywhere else in the building, once I go in the classroom it's my world. You can design it to suit you. (148 – 150) FG 3.*

LF alludes to having a sense of control over the environment in the classroom, in contrast to other places in the school. The opportunity to focus on the business of teaching, while ignoring the distractions elsewhere in the school, appeared to be relished by participants. This viewpoint was echoed by several others.

BOL: *I'd go along with that yeah. You're master of your own destiny and you are...if you're not in control you've a problem anyway. I can say that in general most classes are dare I say enjoyable but certainly there's, I find it very positive. In fact I find in class more relaxing than outside. (267 – 270) FG 3.*

It is evident that the classroom can be an enjoyable place at times and participants described friendly and 'fun' interactions with students.

SF: *I think that's what's very good about the job. I must say I get on better with the kids, the fun you can have with them because they're at an age where you can have great fun. (272 – 273) FG 3.*

Despite the numerous challenges faced in the classroom it is evident that most participants enjoyed their time with the students. The element of control appeared important, while many participants felt like they were at the mercy of others in the staff room, there was general agreement that the classroom was *their* domain. Participants had the freedom to 'design the class to suit them' and often experienced enjoyment within this 'haven' from the stresses of the wider school.

### *Parents, public and media:*

The challenges experienced by participants within the school have been discussed at length above. It was evident from discussions that issues originating outside the immediate school environment could also have an impact on participants' experiences in their working life. Three major potential sources of stress were identified: parents, public perception and media portrayal. Participants described feeling 'under attack' from these quarters at times and it was clear that this experience was distressing for some. This section will explore the impact of external factors on the experience of teachers.

### *Interactions with parents*

Perhaps the most widely cited source of stress from outside the school related to interactions with parents, in particular the aggression with which some participants were occasionally faced. Participants described difficult and stressful encounters with parents who had unrealistic expectations of their children. In some instances



these parents reacted with anger and aggression when their child's poor academic performance or disciplinary problems were raised at parent-teacher meetings. Participants described the stress they experienced as a result and the difficulty they experienced in coping with these 'attacks' by parents.

BOB: *Very difficult when you're being attacked and you know you're not wrong. You know you tell someone 'your child should not be in higher level and they should do pass or foundation level' and you're attacked first and then you might have to wait a year, you might have spotted it in first year, and by third year they're sinking fast and they might finally drop down. There is a huge issue around that with children doing honours who aren't able for it. They're [parents] abusive but dealing with them...I don't know you try not to take it home with you but you do get upset because you do your best to encourage and to push but if someone's not capable the they just can't do honours. (462 – 469) FG 1*

It is evident that dealing with parents in this situation is extremely difficult. Numerous participants echoed BOB's view that some parents cannot accept their child's academic limitations and become angry in the face of well-intentioned advice from teachers. BOB did go on to clarify that this type of reaction was the exception rather than the norm but nevertheless was very difficult to deal with when it occurred.

BOB: *It's stressful and it doesn't change, like that could go on forever with that one child but you could have ten children in the same position and most parents would understand 'she's not great at the maths it's ok'. Others become abusive and I find it very hard. (470 – 473) FG 1*

Other participants who had experienced parental aggression generally suggested that parents were all too willing to blame teachers for any problems encountered by their children.

PG: *What I've found in recent years where the kid is having trouble and the parents back them up straight away they'll say there's a personality conflict with the teacher. Every day it seems to be coming up and parents seem to be more confrontational with teachers. I've seen once or twice in a parent-teacher meeting with kids I'd have worked with and you could see the kids had problems but the parents zoned in on the conflict with the teacher. (444 – 448) FG 2*

It appears that some parents refuse to acknowledge if their child is having difficulties, instead choosing to blame the teacher involved. This was described by many participants as particularly frustrating as they felt they had the best interests of the student at heart.

The issue of unrealistic parental expectations was also commonly cited as a catalyst for friction between participants and their students' parents. Most

participants appeared to have encountered parents who felt they knew better than the teacher, often resulting in arguments. The other extreme was also encountered – parents who rarely attended meetings and showed little or no interest in their child's education. Participants appeared to find this lack of interest just as frustrating as dealing with overbearing parents.

BOB: *There's kind of two ends to it isn't there. Some are driven and expect huge, high expectations and then you have the other side of it where they don't come in and they don't care.*  
*(502 – 504) FG 1.*

It was suggested that parents would avoid coming in if they were expecting a 'bad' report of their child. On the other hand, it was suggested that parents of academically strong children were far more likely to meet with their child's teachers.

KR: *you know if the student is doing well in school the parents will come into every single parent-teacher meeting and be delighted, listen to every teacher. If the student isn't doing well they've heard it all in primary school by the time they get to you they might turn up for first year and you'll never ever see them again, never. You know they'll deal with the principal when they're in serious trouble and...I've never even seen some of them. They haven't even turned up for the first year parent-teacher meeting and the student is in sixth year you know. It, it depends on whether they want to*

*hear it. Some parents just don't want to hear it, they've heard it all before going through primary school. (493 – 501)*

*FG 1.*

Interactions with parents and parental expectations appeared to vary considerably depending on the school context. Participants teaching in schools located in areas designated as disadvantaged described very different experiences to those teaching in private fee-paying schools.

LOB: *Going back to the parents there, I think like it's the parent's expectations of the teacher is a source of friction. Some parents think that we should do everything for their child as well as teaching them. You must sort every problem they have, and you have a teenager who's going through the usual teenager problems and all of that but who's maybe not motivated, who maybe has difficulty learning and has all sorts of difficulties at home. They expect that you're going to fix all of this in the classroom. They expect you to be a social worker, they expect you to be a father to some of them y'know. Their expectations of the teacher and of the school can be astronomical. (504 – 511) FG 2.*

The situation described by LOB in a 'disadvantaged' school was repeated by other participants teaching in similar schools. Teachers in these schools appear to feel under pressure to act as surrogate parents to their students, something that places them under great pressure.

As noted previously, those participants teaching in fee-paying private schools had very different experiences with parents. The expectations were different but appeared to be no less challenging. One such participant described an incident that took place after an exam in her school:

LF: *It is, for example afterwards teachers receiving bouquets of flowers with a note saying 'I only buy flowers for teachers who get my daughter an A' [laughter] I've actually seen those. (158 – 159) FG 3.*

While this is a humorous example, it was clear that parents with children in the school had very high expectations of the teachers and as a result there was pressure on teachers to deliver 'value for money' on the fees parents had paid.

It is evident that interactions with parents can be quite stressful for teachers. Participants described dealing with parental aggression, apathy and unrealistic expectations and the difficulty they experienced in coping with these issues. Some participants clearly took these 'attacks' personally and it was described how one negative comment 'sticks with you' by one participant. Interactions with parents are an important and necessary part of a teacher's work, however in some cases it can clearly be a source of stress and upset.

#### *Public perception of teachers and media 'bashing'*

In addition to the various challenges within schools, participants also identified their portrayal in the media and negative public perception of their profession as a

source of frustration and disappointment. In general participants appeared to feel 'under attack' from the media and most described having experienced negative reactions to their profession from members of the public. Participants explored their beliefs about where the negativity came from and discussed the feeling of frustration at being 'targeted'.

LOB: *I think in relation to the general public perception of teachers and parents as well, it was a huge shock to me when we were back in mid-2002/2003 when we were on strike to get some money from this Celtic Tiger and amm, you'd hear people that we'd threatened the exams by going on strike and the public reaction to that was just...it was a huge shock to me to realise that there was such anger amongst the public and parents that was directed toward teachers. It did shock me at the time because you're going along with your own idea of where you're at and where teachers are at and all of that and then hearing all these people saying we were a lazy shower and we weren't doing this and we weren't doing that, now maybe that was their experience of an individual, but from what was coming across in the media we were all getting it in the neck and that was definitely a shock to me you know that people actually talked that way about us. (456 – 466) FG 2*

The sense of surprise at the negativity is clear. LOB and others involved described how the strike revealed the level of public antipathy towards teachers. Participants went on to explore the reasons for this public negativity.

GOR: *I think that we're an easy target though because, like we all had bad experiences at school, y'know someone will remember a teacher they didn't really like and then once somebody say something sure 'You know they're all the same'. (467 – 469) FG 2*

Many participants appeared to believe that bad school experiences led people to be negative towards all teachers. This view was repeated many times and it appeared to be felt that because everyone has been to school that everyone has an opinion.

CM: *Everyone has an opinion on teaching because everyone has been to school and every parent, whether they're pro or anti, they've all been in school. (452 – 453) FG 1.*

The other proposed explanation for the negativity was the idea that the public believe teaching is an 'easy', well-paid job with short working hours and lengthy holidays.

CK: *People are always saying you only work 22 hours when it's probably more like 44 between what you're teaching and preparing. And you're in school the whole time. Maybe it's 22 hours but you're still in school from 9 to 5 every day. The holidays are great, there's no denying that. I suppose the*

*perception is that it's 22 hours a week and it's a cushy job*

*like. (387 – 391) FG 1.*

It appeared that almost every participant had encountered situations similar to that described by CK. Participants described being annoyed by the assertion that their job was easy, particularly those who were on short-term contracts and not in receipt of the 'cushy' conditions they were accused of having.

DK: *One thing from the public that I, that really annoys me, I am so sick of people saying we have it so easy. I just discovered today, I won't be, with the contract I have I won't get paid for my holidays and I have to sign on for the summer, and if one person says to me during the summer 'God you have a great life' I think I... (471 – 474) FG 2.*

LF: *I suppose again the perception that teachers have it cushy with a 3 month holiday, I mean I've been teaching, I'm into my 12<sup>th</sup> year and only now am I getting paid holidays so I had 11 years of doing other jobs doing the summer and then still taking the flak for being a teacher, you know 'gosh you have it easy' ah so I don't think that's terribly fair, there's such a huge percentage of teachers out there who don't have that cushy lifestyle that supposedly exists which I don't think it's much better than other jobs out there so...that's*



*the public perception that you've all this time off amm so that is not the reality. It's hard to keep hearing all this negativity about the profession when the basis of the negativity doesn't apply to about 30% of the people. (318 – 326) FG 3.*

As DK and LF describes, the 'cushy' conditions that appear to irritate people don't apply to every teacher. Many are not in receipt of paid holidays and instead have to find alternative employment or seek social welfare. It's clear that being labelled as having a very easy existence is frustrating for some but appears to be exceptionally common. Participants appeared to be tired of having to defend themselves.

SF: *I think that perception, you can't get that across to people, like a lot of us take on that attitude that you should become a teacher if you think it's so good, but like there is that perception out there and it's impossible to get around. I think you just have to learn to ignore that. (341 – 344) FG 3.*

It appears that criticism of teaching from both media sources and the public is currently very prevalent and SF suggests the only option is to learn to ignore it. While criticism of the profession did not appear to be intensely stressful to participants, there was a sense of being 'under attack' and having to constantly defend the profession. This was a source of annoyance and frustration and is likely to have a negative impact on job satisfaction.

### Personal, demographic and other factors:

In addition to the numerous issues outlined previously, participants identified a number of other factors affecting their perceived job satisfaction and stress levels. Participants discussed the various factors they considered to be important in stress development including age and experience, personality and coping strategies. Many suggested that these issues were of great importance in shaping the type of experience teachers have at work.

### *Personality and coping*

A great deal of group discussion centred on the role of individual differences in experiencing, and coping with, job stress. Many participants suggested that some teachers are better than others at dealing with work-related challenges, regardless of the circumstances they face. There appeared to be a widespread view that those who are able to 'get on with it' are best able to handle the stresses of teaching.

SM: *If you're going in determined right to find fault with everything that people do or say, take insult to it then you're only making life hard for yourself. My personal opinion is like I'm teaching in M..., I'm, going to be teaching there for the next 30, 40 years. I'm going to be meeting these people every single day, more than my own family and if I don't make an effort to get on with them and to be respectful and friendly and [pause] work with these people I'm making life*

*very difficult for myself, I'm going to have a miserable 30 years ahead of me. You know so I think you know maybe it's in yourself to make the best of the situation, the best of the facilities, the best of the people you're teaching, the best of the management. (19 – 27) FG 1.*

SM's statement suggests that there may be teachers who 'find fault with everything', leading to frustration and dissatisfaction. There is a clear suggestion that individuals have some control over the stress they experience at work and those who do find fault have a long career in which to cope with the perceived problems. Other participants repeated the view that 'making the best' of the situation could be the healthiest approach.

LOB: *Because some people can stress about that last 1% whereas other people are not stressing the small stuff you know so it's very much to your own, what you bring to the situation as well the impact of the stress and tension you're going to get. (325 – 327) FG 2.*

It would appear that not every teacher can simply 'get on with it' where stress is concerned. LOB suggests that some people are better than others at handling stress and not becoming frustrated by 'the small stuff'. Some participants went further, suggesting that some teachers they had encountered were totally unsuited to the profession due to their personality and inability to cope with stress.

PG: *I think you will see an odd person who should never have gone into teaching and their whole personality is...they should never have gone inside the door.*

DK: *I have a friend like that, my best friend from college and knew from day one she should never, probably never have started.*

GOR: *They're the ones that'll be the most stressed because they find it too hard. (553 – 557) FG 2.*

Evidently there appears to be those who are completely unsuited to teaching due to some aspect of their personality. For these individuals it seems it is not just a matter of choosing to 'get on with it'. However, without consulting these individuals directly on the reasons for becoming stressed it is difficult to be certain that personality alone was to blame.

Participants elaborated upon the strategies they used in coping with stressful conditions. Certainly for some this process was easier than it was for others, but a number of approaches and strategies were described.

KR: *Like I think but before you even go into school too in the morning you put on your teacher face, you know your stern face and it's like you're trying to have... (584 – 585) FG 1.*

KR describes adopting a tough persona in order to cope. It appears that this persona is adopted specifically for dealing with troublesome students.

KR: *But you have amm, it's like an act you know, you have this persona and you don't want to diminish and you have this reputation and you have to maintain it, and if you make a threat you have to carry it out, otherwise they'll perceive it as a weakness. You never want to be seen as being weak, and you're walking around with your stern face all day. (587 – 590) FG 1.*

This approach was also used by other participants and it was apparent that appearing 'tough' to students was seen as important in gaining respect and not being seen as 'weak'. It seems to be implied that teachers who are seen as weak may be targeted by disruptive students.

BOB: *Like you say we wear masks. Sometimes you tell them what'll happen if they don't do it, you know it's not going to happen at all like and you're there with the cross face or the stern face. – (597 – 599) FG 1.*

These participants clearly suggest that in order to be taken seriously they must act in a 'stern' manner by putting on a metaphorical mask at the start of the day.

It is evident from the discussions that participants react to, and cope with, stressful situations in a variety of different ways. Participants suggested that personality plays a key role in determining how people deal with the challenges of their work, however a number of other important individual factors were also proposed.

### *Age and experience*

Participants discussed the role of teacher age and experience in shaping their experiences at work. It became clear that teachers at different career stages have very different concerns and stresses. The issue faced by many younger teachers in 'fitting in' to the staff room has already been outlined earlier in this analysis. A number of other age-related concerns were also raised.

Much discussion centred on the challenges faced by younger teachers in becoming 'established', while the issue of adaptability to changing circumstances was cited as being very important to older, more experienced teachers. The teaching environment changes constantly and new challenges must be faced on a regular basis. Participants described these challenges and how teachers at different career stages tackle them.

BOB: *And you change over time... Back in the day [laughter] you'd be enthusiastic and you'd be in the discipline committee and you'd be whatever and you go on that way for years you know, and you do learn as you get older how to deal with it better as well. Because it isn't easy... It does get, it changes and I think it changes for the better, you know. You're just better able to cope when you're older. Now your energies would be less and maybe not as patient but you tick onto them better you know. It does get better...and I think if you're happy in the classroom that's what's really important.*  
*(319 – 329) FG 1.*

This description of the 'life cycle' of a teacher by an experienced participant neatly outlines the major themes discussed by focus group participants in relation to age and experience. Many older participants echoed the view that the energy and enthusiasm of their early years gradually waned but their experience and ability to cope with problems improved with age.

DK: *But that's it isn't it. When you come out first you're full of enthusiasm and that keeps you going for so many years and then there's half way into your career and you've got the enthusiasm and the experience and you're at the top of your game really and then while your enthusiasm might wane for different reasons or you go through difficulty, or you're bored of the job or something, your experience will carry you where your enthusiasm is draining and it all kind of balances out. (414 – 419) FG 2.*

Younger participants also described working hard and getting involved in a variety of extra-curricular activities. However, this appeared to be at least partially motivated by trying to make a positive impression on school management with the aim of gaining full-time employment. These participants described the difficulty of becoming 'established' and having to work hard to prove themselves within their schools.

GOR: *As a new teacher that's the hardest thing, that's the most stressful aspect trying to get established, trying to get whatever you need, trying to get however many hours you*

*need and trying to get into a place where you're happy, that's the most stressful thing. Then the rest is almost like a breeze. (479 – 482) FG 2.*

This view was repeated by another early-career participant who elaborated upon the sense of uncertainty that appears to be common in young teachers.

MM: *Like my friends who don't have jobs are stressing about that and I have a job and I feel there's extra pressure on me to get renewed and work hard, lay it on thick like! It goes from year to year, contract to contract so even planning ahead for stuff like holidays I don't know where I'll be this time next year, so that's stressful for me. Next September am I facing into a new contract? Hopefully, or am I having to go through all the interviews again? So from that perspective it's not being in the classroom or the school so much, it's the pressure of not knowing what's coming. Then there's some people who are just covering maternity leave and their contracts end in February so they're extremely stressed. So we're just looking for people to retire we don't know, it's just speculation. (482 – 490) FG 3.*

The lack of job security experienced by these participants is clearly a source of distress and one which appears to be widespread amongst younger teachers. There appears to be a sense of powerlessness as, despite their best efforts, many teachers



in this situation will not gain the permanent contract they seek and will be left trying to establish themselves all over again, often in a different school.

Participants ranged in age and experience from those in the early stages of their career, as described above, to those on the verge of retirement. Those participants who were in the middle or towards the end of their teaching career described how their circumstances had changed with age. Adapting to changing circumstances and reduction in energy over time appeared to be the main issues for older teachers.

LOB: *I think a key factor in that as well is adaptability. Like I've seen people over the years now inside who were able to adapt and y'know come through long years in their career and have adapted to the changing situation in the classrooms and I've seen other people who were unable to do that. Some have had to retire early because they're living almost in a different decade or almost 2 or 3 decades before and they expect the same behaviour, the same respect and compliance just because they are the teacher and they have been unable to adapt to the changing situation and seeing the stress that brought on them was extraordinary. (420 – 427) FG 2.*

It would appear that while many adapt to the changes, there are teachers who fail to do so. Other participants echoed this view, arguing that while age alone played a role in the experience of stress, other factors were more important.

BOL: *It really goes from year to year, day to day, and am I more stressed than I was 20 years ago? Probably am but that's an age factor more I think than anything else but on a scale of 1 to 10 I'd think maybe 10% more stressed, do you understand what I mean? Like this idea of stress and burnout people think that it's age-linked that the older you are the more stressed you are. I can see people inside in the staffroom that are 20 years younger than me and they're far more stressed than I am so I don't think there's a direct correlation. (433 – 438) FG 3.*

Thus it appears that individual differences have an important influence on how people react to the changing environment as they get older. Some participants felt that they coped better as they got older.

LF: *I think there's a confidence that comes with age. I think you know when you're younger you really do feel you need to prove yourself. (114 – 115) FG 3.*

It would appear that while age and experience have some influence on how people experience and cope with stress, other factors also have an influence. Undoubtedly younger teachers face great pressure to attain job security, particularly in the current climate. These teachers work in a competitive and uncertain environment, often appearing to feel that they have to work 'extra hard' in order to make a good impression. This is clearly a difficult and occasionally exhausting experience. While there appeared to be a general belief among participants that the job becomes

more manageable with age, it was also noted that some teachers struggle to move with the times as they get older. As BOL suggested, there may not be a 'direct correlation' between age and job stress but it is clear an important variable to consider when exploring the challenges faced by teachers.

#### *Pay, conditions and union issues*

Problems in relation to pay and conditions were a source of discussion across each of the focus groups. This is perhaps unsurprising given the changes in conditions resulting from Ireland's current economic difficulties. Participants suggested that they were 'under threat' of pay reductions and increased workloads. This was a source of worry and annoyance for most participants. The perceived lack of support from teaching unions was also cited as being frustrating.

CK: *there's kind of a big issue about people watching their own hours and [pause] I think the whole contracts system and that kind of thing really. – (38 – 39) FG 1.*

The issues of pay and contracts appeared to be particularly important for participants who were new to the profession. Teachers appointed after January 2011 receive significantly less pay than those appointed before this time despite performing the same duties and, as noted earlier, often volunteering to be involved in extra-curricular activities.

BOL: *What I am amazed with is that again as regards conditions and I don't know exactly what I'm talking about but for*

*newly qualified teachers to come in at 10% less than...it defies all natural justice and has anybody complained about it? I find it incredible. (402 – 404) FG 3.*

BOL expressed his surprise at the lack of action in complaining about this perceived injustice, something that other participants appeared to blame their unions for. It was suggested by many participants that their unions were out of touch with reality and very unhelpful in times of need.

BOL: *They're so quiet at the moment in the sense that they are supposed to stand up for our working conditions.*

SF: *But when you hear what their pronouncements on various things are you're nearly glad they're not doing it. They've made such a cock-up of things in recent times.*

LF: *I was temporary for 11 years in my school and I was very luckily made permanent through some sheer fluke this year. I remember contacting an ASTI person about my status and after about 3 years he met me, looked at my status and said 'God I don't think I can help you at all'. I certainly resented having to subscribe to the union after that.*

EG: *They were talking about issues when they weren't issues and when there are issues they're completely absent from the whole thing. (369 – 372) FG 3.*

It was clear from the discussions that participants felt a lot of uncertainty around their working conditions and were frustrated by the perceived lack of support from their unions. Some participants appeared to be worried that conditions would deteriorate further over time and were concerned about their future in teaching. Interestingly while pay cuts have affected younger, less experienced, it was older participants who complained most vociferously about the situation. It is possible that many in this situation feel 'lucky to have a job at all', as one participant mentioned.

### **11.1 Summary and implications of findings:**

This study has identified a wide range of issues faced by Irish teachers and explored their experiences with occupational stress and burnout. Overall, findings suggest that both environmental and individual factors play an important role in the stress development process. In this section a summary of the findings of the focus group study are outlined. The implications of these findings for the subsequent survey study are also outlined. Focus group results and their relations to previous studies will be discussed further in the Discussion chapter.

The level of variation between school and classroom environments experienced by participants was striking. It is evident that Irish teachers experience a wide variety of environmental demands and resources in the course of their work, particularly in relation to interactions with management, colleagues, students and parents. Furthermore, the individual characteristics each teacher possesses appear to be of great importance in influencing the experiences they have and how they are perceived. A summary of findings is presented by category below.

#### ***11.1.1 School and classroom environment***

Findings from the focus group discussions largely conform with those of the literature review – the work environment clearly plays a very important role in stress and burnout development. Participants in the current study identified a range of classroom and school-level factors that they found demanding, as well as a number of positive aspects of these environments.

Within the classroom, student discipline was the major focus of discussion. Dealing with misbehaviour was very difficult for many participants and a source of stress and frustration. Several participants suggested misbehaviour was particularly prevalent in schools situated in areas designated as disadvantaged. Class preparation and lack of student motivation were also cited as challenging. In contrast, some participants viewed the classroom as a 'haven' from issues in the wider school and viewed their classrooms as places where they were in control.

In relation to the wider school level, relations with school management and colleagues were described as being particularly influential facets of the work environment. Those who had experienced problems with principals and colleagues described the negative impact this had on their experiences and the atmosphere within the school. However, management and colleagues were also seen as potential resources in coping with the stresses of the job. Working together with colleagues and receiving praise from management were described as being particularly beneficial.

#### ***11.1.2 Personal, demographic and other factors***

In addition to the environmental factors highlighted by participants, much discussion centred on the influence of demographic and personality factors on the experiences of individual teachers.

In relation to personality, there was broad agreement among participants that some people were better equipped to cope with the stresses of the job than

others. Those who were able to 'get on with it' and those who could command respect and control in the classroom were seen as being the most capable of dealing with stress. Several participants described encountering colleagues who were unsuited to teaching as they lacked these personal attributes. Others described adopting a tough persona with students in order to get through the day and command respect.

In relation to demographic factors, age was viewed as being particularly influential. Younger teachers face a number of issues including simply 'fitting in' in their new school and generally having less job security and less favourable pay and conditions. Several younger participants described the uncertainty they experienced with regard to their future in teaching and the stress they experienced as a result. Participants who were coming towards the end of their careers also described the challenge of staying motivated and enthusiastic towards their work as their energy levels began to wane.

### ***11.1.3 Parents, public and media***

Factors outside of the immediate school environment were also identified by participants as being stressful. Dealing with parental aggression, apathy or unrealistic expectations were all cited as challenging. Participants also felt that teaching was generally portrayed in an unfairly negative light in the media and many had experienced negative attitudes towards their work from the public.



#### ***11.1.4 Implications for survey study***

One of the stated aims of the focus group study was to identify the stressors experienced by teachers and to use this information in the selection of instruments to be employed in the survey study. This was necessary as a wide range of stressors have been identified in the literature, with an equally wide range of instruments in existence for assessing school and classroom environments. Using the findings of the thematic analysis, it was possible to identify survey instruments which appeared to cover the relevant aspects of environmental experience. The particulars of the instruments chosen are described in detail in the next chapter.

A further aim of the focus group study was to use findings to aid in the interpretation of survey results. This will be elaborated upon in the Discussion and Conclusions chapters.

## **12. Survey Study Methodology**

### **12.1 Cross-Sectional Survey**

The methodology employed in this study was a cross-sectional survey, conducted through an online questionnaire. Surveys are perhaps the most widely used method of data-gathering in social research (Robson, 2002). In general, surveys involve the collection of data in relation to a number of variables, usually in a short period of time, with the intention of assessing relationships between these variables (Bryman, 2006).

There has been some debate as to the philosophical underpinnings of survey-style research but in general it is regarded as involving a hypothetico-deductive approach. Under this approach, researchers are confronted by data for which they seek an explanation. Next, testable hypotheses are deduced from accepted existing theories and research methods are designed to test the hypotheses. Confirmed hypotheses are kept, extended and re-tested, while falsified ones are rejected (Mahootian & Eastman, 2009).

Debate exists amongst researchers as to the place and importance of surveys. While some regard surveys as the most valuable 'real world' strategy, others have raised concerns regarding the value of data gathered using this method (Robson, 2002). One source of criticism of the survey approach revolves around the fact that behaviours are not specifically observed or measured, instead what people *say* about these behaviours is measured. Research has demonstrated a disparity

between attitudes and behaviours, necessitating caution when interpreting findings derived from survey data (Kraus, 1995).

In spite of these criticisms, competently run surveys can provide useful data and insights to researchers. As the survey approach is compatible with the positivist school and accepts the assumptions of the scientific method, it is possible to use data gathered to test hypotheses about relationships between variables of interest, and ultimately assist in explaining phenomena of interest to the researcher.

Cross-sectional surveys are regarded as the simplest survey design as participants are required to provide information only once (Fife-Schaw, 2000). This type of survey enables the researcher to assess variables of interest at a given point in time across a particular cross-section of the population under study (Robson, 2002). Cross-sectional survey designs do not facilitate causal judgements of relationships between variables. However, it is possible to use data to compare the scores of different groups (e.g. males/females) on a particular variable (e.g. emotional exhaustion) while controlling for the effects of other variables (e.g. age, neuroticism). The pattern of results obtained may aid in making causal inferences about the data, but great care must be taken to avoid overstating the certainty of such interpretations.

There are a number of advantages to using a cross-sectional survey design. Firstly such surveys are generally inexpensive to run, and can enable the gathering of large amounts of data in a short space of time. Data analysis is also usually straightforward which allows conclusions to be drawn and published relatively quickly in comparison to other methods (Fife-Schaw, 2000). This type of design also

has several notable limitations. As noted previously, it is a relatively indirect way of measuring behaviours and has been found to be particularly susceptible to 'time of measurement' effects. This refers to the impact of recent events and other factors such as the influence media reporting on attitudes to particular issues. In the current study it is possible that such effects may have exerted some influence on the response provided by teachers. However, as most items in the survey referred to demographic, personal or affective factors, time of measurement effects were not a source of great concern.

The aim of the current study was to assess the predictive power of a range of variables in predicting burnout in teachers and to explore relationships between these predictors. Selection of these variables, and survey instruments to assess them, was informed by the earlier focus group phase of study as well as a review of relevant literature. Robson (2002) suggests that surveys work best when standardised questions which are likely to mean the same thing to different respondents are used. This issue has been addressed in the current study by using well-established questionnaires that have been used by other researchers in a variety of contexts and jurisdictions.

It was decided that an online cross-sectional survey approach was the most appropriate methodology for this study. As the variables of interest were not suited to experimental manipulation or direct observation, self-report measures were deemed to be necessary. Online survey was chosen as the most suitable delivery method in order to reach as many teachers as possible. In addition, it was anticipated that participants would be more forthcoming online than they would in

person due to the 'online disinhibition effect' (Suler, 2004). The anonymous and confidential nature of the online survey was clearly articulated in supporting material provided to potential participants in order to encourage participation.

## **12.2 Sampling**

This study employed convenience sampling. The sample produced using this method is not representative of the population from which it is drawn, and no attempt is made to render it representative. This approach is regarded as convenient and conducive to the recruitment of large numbers of participants, however it is quite limited in that generalisation of findings is difficult as it is impossible to establish whether or not they represent real issues in the population of interest (Robson, 2002).

## 13. Method

### 13.1 Sample

The sample for the current study consisted of 192 second-level teachers from schools throughout the Irish republic. Of the participants, 117 were female (60.94%) and 75 (39.06%) were male. Participants' age ranged from 23 to 63 ( $M = 39.61$  years,  $SD = 10.79$ ), with a median age of 38. Participants ranged in experience from 1 year to 41 years ( $M = 15.05$ ,  $SD = 11.12$ ) with a median experience of 12 years. Of the sample, 69.8% were employed on permanent contracts, 13% on temporary contracts of more than 1 year and 17.2% on contracts of less than 1 year.

Participants taught in a number of different types of schools with 18.8% teaching in community/comprehensive schools, 33.3% in vocational schools and 47.9% in secondary schools. In terms of school size, 13% taught in schools with less than 300 students, 9.4% in schools with between 300 and 399 students, 15.1% in schools with 400 – 499 students, 17.2% in schools with 500 – 599 students and 45.3% in schools with 600 or more students. In terms of schools' student sex composition, 68.8% of participants taught in mixed sex schools, 13.5% taught in all male schools while 17.7% taught in all female schools. Lastly participants were asked whether their school was designated as disadvantaged under the Delivering Equality of Opportunity in Schools (DEIS) scheme. 29.7% of participants taught in

DEIS designated schools, 69.3% taught in non-DEIS schools while 1% didn't know if their school was DEIS designated.

While no effort was made to render the sample representative of all second level teachers, the final sample was broadly in line with the general secondary teaching population in Ireland outlined in the OECD Teaching and Learning International Survey (TALIS; Shiel, Gilleece & Perkins, 2009) and Education at a Glance (OECD, 2012). For example, the OECD found that 64.7% of Irish secondary teachers were female, compared with 60.9% in the current sample, age distribution for the sample was also in line with of the population. Contractual status breakdown of the sample was also comparable with figures outlined in the TALIS report for Ireland (2009) which stated that 73% of Irish teachers were permanently employed, 8% were on temporary contracts of more than one year and 19% held temporary contracts of less than one year. In terms of the types of schools taught in by Irish secondary teachers sampled in TALIS, 16.9% taught in community/comprehensive schools, 27.7% in vocational schools and 55.4% in secondary schools. School sex composition and DEIS designation figures in the TALIS report were also found to be similar to those of the current sample.

Participants were recruited through posters (see Appendix 2) emailed to every second-level school in Ireland. The poster contained directions to a website where the online survey was accessible. Schools were asked to print the poster and place it on their staff noticeboards. In addition to the poster, advertisements were placed in *Astir* and *TUI News*, magazines distributed to teachers by the two unions that represent second level teachers in Ireland. Union representatives were also

encouraged to inform ordinary members of the survey's purpose. Finally, links to the survey were also posted on online teacher forums. While these recruitment methods were somewhat indirect, the desired approach of directly emailing teachers with a link to the survey proved impossible due to data protection issues highlighted both by the unions and the Teaching Council, the regulatory body for teachers in Ireland.

Along with the 192 completed surveys, 50 individuals partially completed the survey. Analysis of the basic characteristics of the non-completers found that they were on average younger ( $M = 35.3$ ,  $SD = 8.84$ ) than completers and the proportion of males to females was greater than amongst completers (24 males, 26 females). On contractual and school characteristics the non-completers were largely similar in composition to those who completed the survey in full.

### **13.2 Variables and Scales**

The current study involved a large number of variables and corresponding survey instruments. These variables and the manner in which they were operationalised and measured are outlined below. Short descriptions of the scales and their psychometric properties are also discussed. Variables are presented according to the following categories – demographic and school characteristics, individual differences, school and classroom environment variables, coping, and burnout and physical symptoms.



### ***13.2.1 Demographic and School Characteristics***

The following demographic/individual factors were assessed with one item each.

Response options are presented in parentheses. Contractual Status response options were based on those used in the Teaching and Learning International Survey of second-level teachers, carried out in a number of countries worldwide including Ireland (TALIS; Shiel, Perkins & Gilleece, 2009).

- Sex (Male, female)
- Age (in years)
- Contractual Status (Permanent, Temporary (>1 year), Temporary (<1 year))
- Teaching Experience (in years)

Four school characteristics items were assessed. Items and response options presented in the survey were based on those found in the TALIS study.

- School Type (Secondary, Community, Vocational)
- School size (<300, 300 – 399, 400 – 499, 500 – 599, >600)
- School sex composition (All male, All female, Mixed)
- DEIS designation (Yes, No, Don't know)

### **13.2.2 Individual Differences**

Teacher personality traits were assessed using the 44-item Big Five Inventory (BFI; John, Donahue & Kentle, 1991). The Big Five Inventory is a shorter and freely available alternative to the widely used NEO-FFI survey (Costa & McCrae, 1992). The BFI consists of five sub-scales measuring each of the 'Big Five' personality traits of openness (10 items, e.g. *"Is curious about many different things"*), conscientiousness (9 items, e.g. *"Does a thorough job"*), extraversion (8 items, e.g. *"Is full of energy"*), agreeableness (9 items, e.g. *"Is considerate and kind to almost everyone"*) and neuroticism (8 items, e.g. *"Gets nervous easily"*). Participants are presented with 44 statements about themselves and asked to respond from 1 (strongly disagree) to 5 (strongly agree).

The BFI has repeatedly been found to have robust scores on tests of reliability and validity. John and Srivastava (1999) compared the BFI against the other two most commonly used five-factor personality inventories – Goldberg's (1992) 100-item Trait Descriptive Adjectives test, Costa and McCrae's (1992) 60-item NEO-FFI. On a sample of 462 undergraduates the BFI was found to have high mean scale reliability  $\alpha = .83$ , comparable to the other two inventories. A corrected mean convergent validity correlation of 0.91 was found across the three instruments. In a separate study assessing test-retest reliability, the BFI was found to be highly reliable (mean  $r = 0.80$ ) (Gosling, Rentfrow & Swann, 2003). In the current study, the mean scale Cronbach's alpha coefficient was 0.80, with all five scales having  $\alpha > 0.7$ : Openness ( $\alpha = .81$ ), conscientiousness ( $\alpha = .83$ ), extraversion ( $\alpha = .85$ ), agreeableness ( $\alpha = .70$ ) and neuroticism ( $\alpha = .83$ ).

Core Self-Evaluations (CSE) is a broad, latent higher-order trait indicated by four prominent traits in personality literature: self-esteem, general self-efficacy, locus of control and neuroticism. In the current study, core self-evaluations (CSE) were assessed using the 12-item Core Self-Evaluations Scale (CSES; Judge et al., 2003). Participants are presented with 12 short statements and asked to respond from 1 (strongly disagree) to 5 (strongly agree). For example, *“I am confident I get the success I deserve in life”*.

Judge et al. (2003) assessed scale reliability and validity with four independent samples and found strong internal consistency with all alpha coefficients greater than 0.80 and test–retest reliability of 0.81. Convergent and discriminant validity was suggested by strong correlations with individual measures of global self-esteem, generalized self-efficacy, locus of control, and neuroticism, moderately strong correlations with extraversion and conscientiousness, and weak correlations with agreeableness and openness, in line with theoretical expectations. Gardner and Pierce (2010) in a study of 236 employees at a mining and manufacturing organisation found a Cronbach’s alpha coefficient of 0.82 for the CSES. The current study found a Cronbach’s alpha coefficient of 0.81.

Situation-specific self-efficacy, in this case teaching efficacy, was assessed using the 10-item Teacher Self-Efficacy Scale (Schwarzer, Schmitz & Daytner, 1999). Participants are presented with 10 statements on their beliefs about their teaching capabilities and asked to respond from 1 to 4 (1 - not at all true, 2 - barely true, 3 -

moderately true, 4 - exactly true.) An example of one such item is *“When I try really hard, I am able to reach even the most difficult students.”*

Schwarzer et al. (1999) report Cronbach’s alpha reliability coefficients of between 0.76 and 0.82 for the scale with test-retest reliability of .76 over a period of 1 year (n = 193). Validity was suggested by means of correlations with other teacher characteristics at two points in time. High negative correlations with job strain and with job burnout were found. Schwarzer and Hallam (2008) found Cronbach’s alpha for the scale of 0.80 for a Syrian sample (n = 608), and 0.81 for a German sample (n = 595). The current study yielded Cronbach’s  $\alpha = 0.83$ .

### **13.2.3 School and Classroom Environment Variables**

As discussed previously, the results of the focus group study helped inform selection of instruments assessing school and classroom environments. The final instruments selected are outlined below.

The 21-item Revised School Level Environment Questionnaire (SLEQ; Johnson, Stevens & Zvoch, 2007) was used to assess teacher perceptions of the school environment. The SLEQ consists of 5 sub-scales measuring collaboration (6 items, e.g. *“I have regular opportunities to work with other teachers”*), student relations (4 items, e.g. *“Most students are helpful and cooperative with teachers”*), school resources (4 items, e.g. *“The school library has sufficient resources and materials”*), decision making (3 items, e.g. *“Teachers are frequently asked to participate in decisions”*) and instructional innovation (4 items, e.g. *“We are willing*

*to try new teaching approaches in my school*"). Participants are presented with 21 statements and asked to respond from 1 (strongly disagree) to 5 (strongly agree).

The original SLEQ instrument (Fraser & Rentoul, 1982) consisted of 56 items and 8 sub-scales and was used to measure school climate in a variety of countries. Johnson and Stevens (2001) suggested the SLEQ be shortened to 35 items and 5 sub-scales in light of factor analysis of the original instrument. Further refinement yielded the current 21-item instrument (Johnson et al., 2007). The revised instrument was administered to 2,549 US teachers in order to ascertain reliability and validity characteristics. Cronbach's alpha coefficient for the whole instrument was 0.90 with sub-scales ranging from 0.77 to 0.86. The instrument was also found to satisfactorily differentiate between schools. Reliability analysis of the overall instrument in the current study yielded Cronbach  $\alpha = 0.86$ , with each individual sub-scale having  $\alpha > 0.7$ : Openness ( $\alpha = .81$ ), conscientiousness ( $\alpha = .83$ ), extraversion ( $\alpha = .85$ ), agreeableness ( $\alpha = .70$ ) and neuroticism ( $\alpha = .83$ ).

The 24-item Classroom Environment Questionnaire was used to assess teacher perceptions of classroom environments. This is a shortened version of the Catholic School Classroom Environment Questionnaire (Dorman, 1999), which includes four sub-scales, each of 6 items, measuring interactions (e.g. *"I go out of my way to help students"*), cooperation (e.g. *"Students don't want to help others in class"*), order and organisation (e.g. *"Almost all class time is spent doing work"*), and task orientation (e.g. *"Most classes are well organised"*). Participants are presented with

24 statements and asked to respond from 1 (strongly disagree) to 5 (strongly agree).

Dorman (2003) administered a version of this instrument to 246 Australian teachers and found Cronbach's alpha coefficients ranging from 0.62 (task orientation) to 0.80 (interactions). In the current study, reliability analysis yielded a Cronbach's alpha coefficient of 0.70 for the overall scale while alpha coefficients for the individual sub-scales were 0.55 (cooperation), 0.69 (order and organisation), 0.66 (task orientation), and 0.74 (interactions). Three of the sub-scales fell below the recommended alpha coefficient value of 0.7 (DeVellis, 2003), suggesting unsatisfactory levels of internal consistency in these sub-scales, however values are comparable to figures reported by Dorman. While potential improvements to the scale using factor analysis techniques were explored, it was found that removing items or adjusting the factors did not yield increases in scale reliability.

#### **13.2.4 Coping**

Coping behaviours were measured using the 28-item Brief COPE Inventory (Carver, 1997). Participants are presented with 28 statements relating to coping behaviours (2 for each of the 14 sub-scales) and asked to respond with how often they engage in these behaviours. Response options range from from 1 (I don't do this at all) to 4 (I do this a lot). Sample items include *"I use alcohol or other drugs to make myself feel better"* and *"I get help and advice from other people"*.

Carver (1997) assessed scale reliability by administering the instrument to 168 participants, findings Cronbach's alpha coefficients ranging from 0.50 (venting) to 0.90 (substance use). While these reliability values are lower than what is typically viewed as satisfactory, the small number of items for each sub-scale made achieving high reliability scores difficult. Similar analysis for the current study yielded alpha coefficients ranging from 0.41 (self-distraction) to 0.94 (substance use), with mean alpha coefficient of 0.69 across all scales. Principal components analysis techniques were employed in order to examine potential improvements to the scale, but it was found that removing items or adjusting the factors did not yield increases in scale reliability. Cooper, Katona and Livingston (2008) administered the Brief COPE to 125 care workers, finding patterns of relationships with a number of variables which indicated concurrent and convergent validity for the instrument.

### ***13.2.5 Burnout and Physical Symptoms***

Teacher Burnout was assessed using the 3 dimensions of the 22-item Maslach Burnout Inventory-Educators Survey (MBI-ES; Maslach et al., 1996). The MBI measures emotional exhaustion (9 items), depersonalisation (5 items) and reduced personal accomplishment (8 items) and is very widely used in survey-based evaluation of burnout in teachers. Items are presented to participants in the form of statements and participants are asked how often they have experienced each scenario on a 7 point scale ranging from "never" to "every day".

Kokkinos (2006) assessed the reliability of the MBI-ES with 771 Cypriot teachers, finding Cronbach's alpha coefficients of 0.85, 0.63 and 0.79 for emotional exhaustion, depersonalisation and personal accomplishment respectively. In the current study Cronbach's alpha coefficients of 0.91 for emotional exhaustion, 0.74 for depersonalisation, and 0.81 for personal accomplishment were found.

Validity of the instrument has been suggested by a number of findings. Firstly, individual MBI scores have been found to correlate highly with independent ratings by those who knew the participant well (Jackson & Maslach, 1982). Secondly, MBI scores correlate with various measures hypothesised to relate to burnout such as heavy workload and intention to leave one's job (Maslach, Jackson & Leiter, 1996).

Physical symptoms of stress were measured using the 12-item Physical Symptoms Inventory (PSI; Spector & Jex, 1998). Participants are presented with a list of 12 symptoms including trouble sleeping, loss of appetite, upset stomach, etc. and asked to indicate how often they have experienced each symptom in the last month. Response options range from 1 to 5, corresponding to: Not at all, once or twice, once or twice per week, most days, and every day.

Spector and Jex (1998) assessed the properties of the longer 18 item scale. As a number of items were very rarely endorsed, they were dropped from the instrument. Additionally, it is suggested that as each item represents a separate symptom, internal consistency is not a meaningful measure of scale consistency.



Nomological validity of the scale was suggested by results of a meta-analysis of 18 studies which found patterns of correlations between PSI items and various occupational stress variables which conformed to expectations based on theory and previous research. In the current study the PSI was used to assess the specific correlations between burnout dimensions and individual physical symptoms.

### **13.3 Procedure**

Prior to full distribution of the survey, several volunteers were recruited to take part in a small pilot study to ascertain how long the survey took to complete and also to ensure the instructions and items were easy to comprehend. Volunteers were satisfied that the survey could be completed without difficulty and reported that it took between 15 and 20 minutes to finish.

Participants were directed by the poster and advertisements to visit a website ([teachersurveyireland.blogspot.com](http://teachersurveyireland.blogspot.com)) which provided a link to the survey (hosted on [surveymonkey.com](http://surveymonkey.com)), and a brief explanation of the purpose of the study, the researcher and instruction on how to proceed. Upon clicking the link participants were presented with a full explanation of the study, information on confidentiality and finally were asked for their consent to the use of their data for research purposes before proceeding.

The first items presented to participants related to demographic, contractual and school characteristic information. Participants were then presented with the BFI personality inventory, teacher self-efficacy and core self-evaluations

instruments. Next, school and classroom environment instruments were presented, followed by the Brief COPE inventory. Finally, participants were presented with the MBI-ES burnout scale and PSI physical symptoms inventory. Once participants had completed the survey they were presented with a final page thanking them for their participation and reiterating the earlier message on consent and confidentiality. Ethical considerations for the survey will be discussed further in Chapter 14.

Recruitment took place in early 2012, with posters emailed to schools and advertisements placed in relevant newsletters in March. Upon consultation with several teachers it was decided that this time of year was suitable, as this period of the year is seen as relatively 'quiet' for teachers and thus potential participants were likely to have enough time to complete the survey. This would probably not have been the case had it been administered later in the year when exam preparation would mean less spare time for teachers. It is possible that the time of the year in which the survey was administered may have influenced responses. Fife-Schaw (2000) highlighted this 'time of measurement' effect as a flaw in cross-sectional surveys.

## **13.4 Statistical Analysis**

### ***13.4.1 Descriptive***

The first step in analysis of the data involved the application of descriptive statistical techniques. Medians, mean scores and standard deviations were

calculated for continuous variables, while percentages for each level of categorical variables were also calculated.

#### **13.4.2 Bivariate**

The next step in statistical analysis of the data involved applying bivariate inferential tests. A number of tests were used depending on the type of variables and characteristics of the data. For example, Spearman correlations were used to assess covariance between independent variables that violated the assumption of normality. As many of the variables were not normally distributed, such non-parametric tests were used.

Participant sex was the only dichotomous independent variable included in the current study. Independent samples t-tests were used to assess differences between groups for variables where the relevant assumptions were met. Assumptions of the t-test for independent subjects include normal distribution of the data and equality of variances in the dependent variable for both levels of the independent variable. In the case of those variables where these assumptions were not satisfactorily met, the non-parametric Mann-Whitney U test was used.

A number of categorical independent variables were also included in the study. Again, both parametric and non-parametric tests were used to assess for differences. One-way ANOVAs were used when assumptions (similar to those for the t-test) about the data were met. Those variables that failed to meet these assumptions required the use of the non-parametric Kruskal-Wallis test.

### **13.4.3 Multivariate**

In order to gain further understanding of the relationship between independent and dependent variables multiple regression was used. Multiple regression refers to a family of statistical techniques that enable researchers to ascertain the proportion of variance in a dependent variable that can be attributed to a combination of independent variables (Field, 2005). The procedure also provides a measure of the individual contribution of each independent variable in predicting the variance of the dependent variable.

There are several different types of multiple regression and the specific method chosen depends on the nature of the investigation being carried out. In the current analysis, several standard multiple regressions were used. This method involves entering all independent (or predictor) variables into the regression equation simultaneously. This method yields an estimate of the overall predictive power of the group of variables in predicting variance in the dependent variable, as well as providing values on the individual contributions of each independent variable.

A number of assumptions about the data should be met before using multiple regression. Firstly, an adequate sample size must be present in order to produce generalisable results. A number of guidelines for sample size have been presented, with some suggesting as many as 15 participants per predictor variable (Field, 2005). Tabachnik and Fidell (2007) provide the following formula for

calculating required sample size:  $N > 50 + 8m$ , (where  $m$  = number of independent variables). Multiple regression is also particularly sensitive to outliers and it may be necessary to remove certain values. In addition, assumptions of normality, linearity, homoscedasticity and independence of residuals must all be met. These refer to various aspects of the distribution of scores and relationships between variables (Pallant, 2007).

Multicollinearity and singularity must also be examined, i.e. highly correlated independent variables or variables that are a combination of others are unsuitable for use in regression models. In the current analysis, a number of the predictors were strongly correlated with each other, with correlation coefficients exceeding recommended levels, i.e. values greater than 0.8 (Field, 2005). This affected the ability to assess the relative importance of individual predictors for each dependent variable and necessitated the inclusion of an extra level of analysis to reduce the number of predictors entered in the final model. As a result, separate multiple regressions were used for each category of predictor (e.g. work environment variables, individual difference variables, etc.) to identify the significant predictors. These predictors were then entered into a final regression to assess their contributions to the variance in each dependent variable.

## **14. Ethics**

All research involving human participants requires due consideration of ethical matters. While ethics committees and codes of conduct set out guidelines for researchers, it is the ultimate responsibility of the individual researcher to ensure their research is conducted with appropriate adherence to ethical standards.

Because the Psychological Society of Ireland (PSI) code of ethics is laid out from the point of view of a practitioner, the clauses which relate to research practice are not placed conveniently together. As a result, the ethical principles for research outlined in the British Psychological Society's (BPS) *Ethical Principles for Conducting Research with Human Participants* were used to guide the approach taken in the current study. Principles outlined in the document include consent, deception, debriefing, withdrawal, confidentiality and protection of participants. These issues and their treatment in the current study are discussed below.

This study was assessed and deemed to meet ethical standards for research by the Ethics Committee of the School of Applied Psychology, UCC.

### **14.1 Consent**

It is of great importance that participants are provided with information on the objectives of the investigation where possible. In particular, participants should be informed of all aspects that may influence their decision to participate. Participants in this study were provided with a full explanation of the nature and duration of the

survey and required to clearly indicate their understanding and agreement to participate before commencing the questionnaire.

#### **14.2 Deception**

Withholding information that would likely influence participant willingness to take in a study part is regarded as unacceptable. In the current study, no information was withheld from participants.

#### **14.3 Debriefing**

Once participants have taken part in research, they should be provided with any necessary information to complete their understanding of the nature of the research. In this study participants were presented with information on the nature of the study and how their data would be used upon submitting their completed questionnaire.

#### **14.4 Withdrawal**

It must be made clear to participants at the onset of the investigation that they may withdraw their participation at any time. Participants also retain the right to withhold or withdraw consent for their data to be used, even after completing their part in the investigation. All participants in the current study were advised of these rights.

#### **14.5 Confidentiality**

Information obtained about a participant during research must remain confidential unless otherwise agreed in advance. Participants were assured of the confidentiality of their data and no personal identifiers were used at any point. Participant data was stored electronically under password protection and only the researcher has access to this data.

#### **14.6 Protection of Participants**

It is the responsibility of researchers to protect participants from physical and mental harm during the investigation. In this research all surveys were deemed acceptable and unlikely to place undue stress on participants.



## 15. Survey Results

This section will present the results of statistical analysis of the survey data.

Descriptive results will be presented for both dependent and independent variables. Results will be grouped together by the following categories – demographic and school characteristics, individual differences, school and classroom environment variables, coping, and burnout and physical symptoms.

Descriptive and bivariate analyses will be presented according to these categories.

Multivariate analyses will also be presented according to these categories and final analyses according to the relevant dependent variable.

### 15.1 Descriptive Results

#### *15.1.1 Demographic and School Characteristics*

The sample for the current study consisted of 192 second-level teachers from schools throughout the Irish republic. Of the participants, 117 were female (60.94%) and 75 (39.06%) were male. Participants' age ranged from 23 to 63 ( $M = 39.61$  years,  $SD = 10.79$ ), with a median age of 38. Participants ranged in experience from 1 year to 41 years ( $M = 15.05$ ,  $SD = 11.12$ ) with a median experience of 12 years.

A number of variables assessed the characteristics of participants' employment status and the schools they taught in. Participants were asked about their contractual status, the type of school they taught in, the number of students in the school, the student sex composition and whether their school was designated

as disadvantaged under the DEIS scheme. Descriptive results for these variables are presented in Table 15.1.

Table 15.1

*Distribution of Participants by Sex and School Characteristics (N = 192)*

Variable	N	%
Sex:		
Male	75	39.1
Female	117	60.9
Contractual status:		
Permanent	134	69.8
Temporary (>1 year)	25	13.0
Temporary (<1 year)	33	17.2
School type:		
Community/Comprehensive	36	18.8
Vocational	64	33.3
Secondary	92	47.9
No. of students in school:		
<300	25	13.0
300 – 399	18	9.4
400 – 499	29	15.1
500 – 599	33	17.2
>600	87	45.3
Student sex:		
All male	132	13.5
All female	25	17.7
Mixed	34	68.8
DEIS designation:		
Yes	57	29.7
No	133	69.3
Don't know	2	1.0

### **15.1.2 Individual Differences**

The Big 5 personality traits of extraversion, agreeableness, conscientiousness, neuroticism and openness were measured using the 44-item Big Five Inventory.

Two further individual difference variables were also measured – core self-evaluations and teacher self-efficacy.

Table 15.2 shows the mean values and standard deviations for the 7 relevant variables in this category.

Table 15.2

*Means, Medians, Standard Deviations, Maximum and Minimum Values for Individual Difference Variables*

Variable	Mean	Median	St. Dev.	Min.	Max.
Extraversion	27.88	28	5.69	13	40
Agreeableness	36.10	36	4.06	23	45
Conscientiousness	36.72	37	4.72	23	45
Neuroticism	20.52	21	5.65	9	37
Openness	36.86	37	5.54	20	49
Teacher self-efficacy	31.36	32	5.11	16	40
Core self-evaluations	44.39	45	6.48	25	60

### **15.1.3 School and Classroom Environment Variables**

A number of variables assessed participant perceptions of the school and classroom environment in which they worked. School-level variables included: collaboration, student relations, school resources, decision making and instructional innovation. The following classroom-level variables were assessed: interactions, co-operation, task orientation and order and organisation.

Means and standard deviations for these variables are presented in table 15.3.

Table 15.3.

*Means, Medians, Standard Deviations, Maximum and Minimum Values for School and Classroom Variables*

Variable	Mean	Median	St. Dev.	Min.	Max.
Collaboration	20.08	21	4.30	8	29
Student relations	14.82	16	3.52	4	20
School resources	12.65	13	3.74	4	20
Decision making	8.38	8	2.87	3	15
Inst. Innovation	12.74	15	2.87	6	20
Interactions	26.52	26	2.22	18	30
Co-operation	21.03	21	2.84	12	28
Task orientation	23.14	23	3.14	16	30
Order and org.	20.73	21	3.71	10	30

#### **15.1.4 Coping**

Descriptive statistics for coping variables are presented in table 15.4. Fourteen coping variables were assessed using the Brief COPE measure: Self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioural disengagement, venting, positive reframing, planning, humour, acceptance, religion and self-blame.

Table 15.4

*Means, Medians, St. Dev., Minimum and Maximum Values for Coping Variables*

Variable	Mean	Median	St. Dev.	Min.	Max.
Self-distraction	5.03	5	1.50	2	8
Active coping	6.28	6	1.42	2	8
Denial	2.54	2	1.05	2	8
Substance use	2.63	2	1.18	2	8
Use of emotional support	5.28	5	1.84	2	8
Use of instrumental support	5.74	6	1.67	2	8
Behavioural disengagement	2.44	2	0.96	2	8
Venting	4.37	4	1.47	2	8
Positive reframing	5.42	6	1.56	2	8
Planning	6.28	6	1.37	2	8
Humour	4.37	4	1.60	2	8
Acceptance	5.73	6	1.36	2	8
Religion	3.34	2	1.70	2	8
Self-blame	4.34	4	1.51	2	8

### **15.1.5 Burnout and Physical Symptoms**

The three dimensions of burnout - emotional exhaustion, depersonalisation and personal accomplishment - were assessed using the Maslach Burnout Inventory – Educators Survey. The Physical Symptoms Inventory assessed how frequently participants experienced 12 separate symptoms. Descriptive statistics for these variables are presented in table 15.5.

Table 15.5

*Means, Medians, St. Dev., Min. and Max. Values for Burnout Dimensions and Physical Symptoms.*

Variable	Mean	Median	St. Dev.	Min.	Max.
Emotional exhaustion	29.44	27	11.00	9	62
Depersonalisation	10.45	9	4.84	5	33
Personal accomplishment	42.89	44	6.86	24	56
Upset stomach	1.51	1	0.73	1	5
Trouble sleeping	2.13	2	1.04	1	5
Headache	1.87	2	0.80	1	5
Acid indigestion/heartburn	1.51	1	0.82	1	5
Eye strain	1.83	2	0.97	1	4
Diarrhoea	1.31	1	0.66	1	5
Stomach cramps	1.35	1	0.66	1	5
Constipation	1.36	1	0.69	1	5
Ringin in the ears	1.40	1	0.88	1	5
Loss of appetite	1.24	1	0.60	1	5
Dizziness	1.38	1	0.69	1	4
Tiredness or fatigue	3.03	3	1.11	1	5

Maslach, Jackson and Leiter (1996) developed cut-off points for low, moderate and high scores on each of the three burnout dimension based on a normative US sample of 1,104 medical professionals. According to these categories the mean scores for the sample as a whole fall within the moderate range for emotional exhaustion and personal accomplishment and low for depersonalisation. For emotional exhaustion, a score of 36 or more is considered 'high'. Of the current sample, 52 participants were found in this range, constituting approximately 27.08% of the population. A further 62 (32.3%) were in the moderate range, with the remaining 78 (40.62%) categorised as having low emotional exhaustion scores.

In relation to depersonalisation, a score of 19 or more was seen to refer to a high level of the dimension. In the current sample 16 participants (8.33%) fell within this range, with 21 participants (10.93%) in the moderate range and the remaining 155 participants (80.74%) having low depersonalisation scores. In relation to personal accomplishment, scores of 38 or less are considered to be low. 52 participants (27.08%) fell within this range, with 53 (27.60%) falling in the moderate range. Finally, the remaining 87 participants (45.32%) were found to have personal accomplishment scores of 45 or more, considered to be within the high range.



## **15.2 Bivariate Analysis**

In this section of the report, results of analyses of the relationships between IVs and DVs are reported. Results are organised according to the same categories used in the previous section, i.e. demographic and school characteristics, individual differences, school and classroom environment variables, coping, and burnout and physical symptoms. For each category, a table of correlations is provided, detailing correlations between the relevant independent variables and the three dependent variables (dimensions of burnout). Graphical representations of the distributions of continuous variables may be found in the appendix.

Results for categorical variables are also provided. For example, differences in burnout scores between male and female teachers and those teaching in various categories of school are assessed and tables of results provided.

### ***15.2.1 Demographic and School Characteristics***

As this category contains both continuous and categorical variables, both correlations and tests of difference were performed in order to investigate relationships between IVs and DVs.

Age and years of experience, the two continuous variables in this category, as well as the three dimensions of burnout were assessed for normality. As a number of these variables were found to not to be normally distributed, the non-parametric Spearman's rho was employed to assess correlations between these variables. Results of this analysis are presented in table 15.6.

Correlation analyses indicated that while age was not significantly related to any of the three burnout dimensions, years of experience had a significant, small, negative correlation with depersonalisation ( $\rho = -.144$ ,  $p = .046$ ).

Table 15.6.

*Spearman Correlations between Demographic Variables and Burnout Dimensions.*

	1	2	3	4	5
1. Age		.906**	.023	-.132	.063
2. Years of experience			.036	-.144*	.098
3. Emotional exhaustion				.425**	-.243**
4. Depersonalisation					-.369
5. Pers. accomplishment					

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

The categorical variables of sex, contractual status, school type, school sex composition, number of students, and disadvantaged status were each assessed in terms of between-group differences for each burnout dimension. Results for each variable are presented and described below. Results for emotional exhaustion are presented first, followed by those for depersonalisation and personal accomplishment.

Table 15.7

*Results for Analysis of Categorical Variables and Emotional Exhaustion*

IV	Test Statistic	Degrees of Freedom	p
Sex	U = 4914		.16
Contractual Status	$\chi^2 = 3.61$	2	.16
School Type	$\chi^2 = 5.29$	2	.07
No. of Students	$\chi^2 = 6.32$	2	.18
Student Sex	$\chi^2 = 1.34$	2	.51
DEIS Designation	$\chi^2 = 1.25$	2	.54

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

A non-parametric Mann-Whitney U test was conducted to compare the emotional exhaustion scores for males and females, as emotional exhaustion scores for female participants were not normally distributed. There was no significant difference in scores for males (Md = 27, n = 75) and females (M = 28, n = 117),  $U = 4914$ ,  $z = 1.4$ ,  $p = .16$ .

In order to assess differences in emotional exhaustion between different contractual groups, a non-parametric Kruskal-Wallis Test with multiple comparisons was used. Participants were divided into three groups: Permanent (Md = 27, n = 134), Temporary – over 1 year (Md = 26, n = 25), Temporary – under 1 year (Md = 34, n = 33). There was no statistically significant difference between the groups:  $\chi^2(2, 192) = 3.61$ ,  $p = .16$ .

In order to assess the impact of school type on emotional exhaustion, a Kruskal-Wallis test was used. Participants were again divided into three groups: those teaching in Community/Comprehensive schools (N = 36), those teaching in Vocational schools (N = 64) and finally those teaching in Secondary schools (N = 92). No statistically significant difference was found in emotional exhaustion between the groups:  $\chi^2 (2, 192) = 5.29, p = .071$ .

The next categorical variable analysed related to the number of students in participants' schools. This variable was divided into 5 groups: <300 students, 300 – 399, 400 – 499, 500 – 599 and 600+ students. In order to analyse the impact of student numbers on emotional exhaustion, a non-parametric Kruskal-Wallis test was used. There was no statistically significant difference between groups:  $\chi^2 (2, 192) = 6.32, p = .18$ .

Student sex was another categorical variable examined in the current analysis. Participants were again divided into three groups: those teaching in mixed schools, all male schools and all female schools. A Kruskal-Wallis test was used to investigate potential differences in emotional exhaustion between the groups. There was no statistically significant difference between groups:  $\chi^2 (2, 192) = 1.34, p = .51$ .

The final categorical variable related to whether the participants' school was designated as disadvantaged under the DEIS scheme. Three groups were identified: Those teaching in DEIS schools, those teaching in non-DEIS schools and those who didn't know their school's status. Between-group differences were analysed using a

Kruskal-Wallis test. No statistically significant differences were found in emotional exhaustion:  $\chi^2(2, 192) = 1.25, p = .54$ .

Table 15.7

*Results for Analysis of Categorical Variables and Depersonalisation*

IV	Test Statistic	Degrees of Freedom	p
Sex	U = 3540.5		.02*
Contractual Status	$\chi^2 = 8.76$	2	.01*
School Type	$\chi^2 = 1.11$	2	.57
No. of Students	$\chi^2 = 3.28$	2	.51
Student Sex	$\chi^2 = 1.38$	2	.50
DEIS Designation	$\chi^2 = 2.67$	2	.26

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

A non-parametric Mann-Whitney U-test was conducted to compare male and female scores. This test revealed a significant difference between depersonalisation score of males (Md = 10, n = 75) and females (Md = 8, n = 117),  $U = 3540.5$ ,  $z = -2.27$ ,  $p = .023$ . The effect size was relatively small according to Cohen (1988) criteria,  $r = .16$ .

In order to assess differences in depersonalisation between different contractual groups, a non-parametric Kruskal-Wallis Test with multiple comparisons was used. A significant difference between groups was found,  $\chi^2(2, 192) = 8.76$ ,  $p = .013$ . Pairwise comparisons found that those participants on Temporary – under 1 year contracts (Md = 13) had significantly higher median depersonalisation scores than those on both Temporary – over 1 year contracts (Md = 8,  $p = .021$ ,  $r = .03$ ) and those on Permanent contracts (Md = 9,  $p = .004$ ,  $r = .22$ ). The effect size for the

differences was relatively small. There was no significant difference in depersonalisation scores between those on Temp – over 1 year contracts and those on Permanent contracts.

A Kruskal-Wallis test was used to analyse between-group differences in depersonalisation depending on school type. No significant difference was found,  $\chi^2 (2, 192) = 1.11, p = .573$ . In order to assess differences in depersonalisation by number of students, a Kruskal-Wallis test was used. No significant difference was found,  $\chi^2 (2, 192) = 3.28, p = .512$ .

A Kruskal-Wallis test was also used to assess between-group differences in depersonalisation depending on student sex. Again, no significant difference was found,  $\chi^2 (2, 192) = 1.38, p = .501$ . Finally, in order to assess potential differences in depersonalisation by DEIS designation, a Kruskal-Wallis test was used. No significant difference was found,  $\chi^2 (2, 192) = 2.67, p = .264$ .

*Table 15.8*

*Results for Analysis of Categorical Variables and Personal Accomplishment*

IV	Test Statistic	Degrees of Freedom	p
Sex	$t = -1.99$	129.1	.049*
Contractual Status	$\chi^2 = 9.31$	2	.01*
School Type	$F = 3.4$	2	.04*
No. of Students	$\chi^2 = 4.67$	2	.32
Student Sex	$\chi^2 = 3.87$	2	.14
DEIS Designation	$\chi^2 = .26$	2	.88

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

An independent samples t-test was used in assessing differences in personal accomplishment scores for males and females. There was a significant difference between personal accomplishment score for males ( $M = 41.6$ ,  $SD = 7.84$ ) and females ( $M = 43.72$ ,  $SD = 6.04$ ),  $t(129.08) = -1.99$ ,  $p = .049$ . The effect size was small according to Cohen's (1988) criteria at  $r = 0.15$ .

A non-parametric Kruskal-Wallis test was conducted in order to explore the relationship between contractual status and personal accomplishment as personal accomplishment was not normally distributed for those on permanent contracts. There was a statistically significant difference between the groups:  $\chi^2(2, 192) = 9.31$ ,  $p = .01$ . Pairwise comparisons found that those participants on Temporary – under 1 year contracts ( $Md = 40$ ) had significantly lower median personal accomplishment scores than those on both Temporary – over 1 year contracts ( $Md = 43$ ,  $p = .017$ ,  $r = .31$ ) and those on Permanent contracts ( $Md = 45$ ,  $p = .003$ ,  $r = .23$ ). Effect sizes for these differences were small to medium under Cohen's (1988) criteria. There was no significant difference in personal accomplishment scores between those on Temp – over 1 year contracts and those on Permanent contracts.

A one-way analysis of variance test was used to assess differences in personal accomplishment by school type. There was a statistically significant difference in personal accomplishment scores:  $F(2, 189) = 3.40$ ,  $p = .035$ . Post-hoc comparisons using the Tukey HSD test indicated that the mean personal accomplishment score for those participants teaching in Community/Comprehensive schools ( $M = 44.61$ ,  $SD = 6.61$ ) was significantly higher than for those teaching in Vocational schools ( $M = 41.20$ ,  $SD = 6.72$ ) at the  $p < .05$ .



level. The size of the effect was small according to Cohen (1988) criteria,  $r = .25$ .

There were no other statistically significant differences in personal accomplishment between the groups.

A Kruskal-Wallis test was used to assess differences in personal accomplishment by school size. No statistically significant difference was found,  $\chi^2 (2, 192) = 4.67, p = .32$ . A Kruskal-Wallis test was conducted to explore potential differences in personal accomplishment depending on student sex. There was no statistically significant difference between groups:  $\chi^2 (2, 192) = 3.87, p = .14$ . Finally, in order to assess differences in personal accomplishment based on DEIS designation, a Kruskal-Wallis test was conducted. There was no statistically significant difference between groups:  $\chi^2 (2, 192) = .26, p = .88$ .

### ***15.2.2 Individual Differences***

Findings in relation to individual difference variables and their correlations with the three burnout dimensions are presented below. In this case, openness was the only normally distributed variable, necessitating the use of Spearman's rho correlation coefficients. The individual difference variables included in this analysis were: extraversion, agreeableness, conscientiousness, neuroticism, openness, teacher self-efficacy (TSE) and core self-evaluations (CSE). The three dimensions of burnout are emotional exhaustion, depersonalisation and personal accomplishment. Results of the analysis are presented in table 15.9.

Table 15.9.

*Spearman Correlations between Individual Differences Variables and Burnout Dimensions.*

	1	2	3	4	5	6	7	8	9	10
1. Extraversion		.218**	.293**	-.361**	.101	.340**	.390**	-.341**	-.299**	.376**
2. Agreeableness			.324**	-.340**	.202**	.209**	.325**	-.130	-.268**	.313**
3. Conscientiousness				-.238**	.093	.187**	.419**	-.076	-.253**	.235**
4. Neuroticism					-.084	-.139	-.579**	.496**	.240**	-.210**
5. Openness						.231**	.085	.035	-.001	.288**
6. TSE							.272**	-.164*	-.240**	.564**
7. CSE								-.517**	-.510**	.440**
8. Em. Exhaustion									.425**	-.243**
9. Depersonalisation										-.369**
10. Pers. Accomp.										

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

Analysis demonstrated a large number of significant correlations between individual difference variables and burnout dimensions. For example, emotional exhaustion was significantly and negatively correlated with extraversion ( $\rho = -.34$ ), teacher self-efficacy ( $\rho = -.16$ ), core self-evaluations ( $\rho = -.52$ ) and positively correlated with neuroticism ( $\rho = .50$ ). Depersonalisation was significantly correlated with each variable except for openness and personal accomplishment was significantly correlated with each individual difference variable. These relationships will be explored in more detail in the Discussion.

### ***15.2.3 School and Classroom Environment Variables***

Findings in relation to school and classroom variables and their correlations with the three burnout dimensions are presented below. As all of the variables were not normally distributed, Spearman's  $\rho$  was used. School-level variables included: collaboration, student relations, school resources, decision making and instructional innovation. The following classroom-level variables were assessed: interactions, co-operation, task orientation and order and organisation. Results of the analysis are presented in table 15.10.

A large number of significant correlations of varying directions and sizes between school and classroom variables and burnout dimensions were identified. Emotional exhaustion was negatively and significantly correlated with collaboration ( $\rho = -.25$ ), student relations ( $\rho = -.27$ ), school resources ( $\rho = -.20$ ),

participation in decision making, instructional innovation ( $\rho = -.15$ ), classroom cooperation ( $\rho = -.14$ ) and order and organisation ( $\rho = -.29$ ).

Depersonalisation had a number of significant negative correlations with environment variables including student relations ( $\rho = -.22$ ), decision making ( $\rho = -.15$ ), instructional innovation ( $\rho = -.18$ ), classroom interactions ( $\rho = -.33$ ), cooperation ( $\rho = -.24$ ) and order and organisation ( $\rho = -.41$ ).

Personal accomplishment was positively correlated with student relations ( $\rho = .33$ ), decision making ( $\rho = .16$ ), instructional innovation ( $\rho = .20$ ), classroom interactions ( $\rho = .51$ ), cooperation ( $\rho = .20$ ), task orientation ( $\rho = .15$ ) and order and organisation ( $\rho = .38$ ).

Table 15.10.

*Spearman Correlations between School and Classroom Variables and Burnout Dimensions.*

	1	2	3	4	5	6	7	8	9	10	11	12
1. Collaboration		.278**	.409**	.433**	.602**	.006	.179*	.107	.231**	-.252**	-.138	.178
2. Student Relations			.281**	.192**	.237**	.299**	.160*	.180*	.431**	-.270**	-.219**	.327**
3. School Resources				.215**	.283**	.102	.131	.123	.180*	-.198**	-.128	.076
4. Decision Making					.419**	.038	.209**	-.048	.194**	-.148*	-.146*	.161*
5. Inst. Innovation.						.148*	.231**	.201**	.284**	-.154*	-.178*	.202**
6. Interactions							.165*	.161*	.203**	-.016	-.325**	.514**
7. Cooperation								.067	.234**	-.142*	-.242**	.199**
8. Task Orientation									.357**	-.001	-.106	.153*
9. Order & Org.										-.286**	-.414**	.379**
10. Em. Exhaustion											.425**	-.243**
11. Depersonalisation												-.369**
12. Pers. Accompl.												

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

#### **15.2.4 Coping**

Fourteen coping variables were assessed in the current study: Self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioural disengagement, venting, positive reframing, planning, humour, acceptance, religion and self-blame.

Spearman's rho was used to examine correlations between the 14 coping variables and the three dimensions of burnout as none of the variables were found to be normally distributed. Results of the analysis are presented in table 15.11. A number of significant correlations of varying directions and sizes between coping variables and burnout dimensions were identified. Emotional exhaustion was significantly and positively correlated with denial ( $\rho = .25$ ), substance use ( $\rho = .17$ ), behavioural disengagement ( $\rho = .28$ ), venting ( $\rho = .16$ ) and self-blame ( $\rho = .31$ ).

Depersonalisation was found to have significant negative correlations with active coping ( $\rho = -.22$ ), use of emotional support ( $\rho = -.15$ ), use of instrumental support ( $\rho = -.19$ ) and planning ( $\rho = -.26$ ). Depersonalisation was positively correlated with denial ( $\rho = .21$ ) and behavioural disengagement ( $\rho = .35$ ).

Personal accomplishment had significant negative correlations with denial ( $\rho = -.25$ ) and behavioural disengagement ( $\rho = -.15$ ). Significant positive correlations were identified with active coping ( $\rho = .43$ ), use of emotional support ( $\rho = .16$ ), use of instrumental support ( $\rho = .28$ ), positive reframing ( $\rho = .32$ ), planning ( $\rho = .41$ ), use of humour ( $\rho = .16$ ) and acceptance ( $\rho = .28$ ).

Table 15.11.

*Spearman Correlations between Coping Variables and Burnout Dimensions.*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Self-distract.		.002	.153*	.060	.087	.074	.128	.133	.066	-.060	.153*	.062	.025	.199*	.073	.116	.021
2. Active			-.059	.024	.159*	.186**	-.286**	.160*	.344**	.518**	.097	.356**	.039	-.076	-.062	-.223**	.428**
3. Denial				.075	-.071	.145*	.388**	-.011	-.026	-.189**	.123	-.051	.036	.103	.248**	.205**	-.245**
4. Substance					-.045	-.131	.187**	.109	.018	.039	.035	.112	.055	.118	.174*	.116	.039
5. Em. Supp.						.727**	-.041	.357**	.224**	.182*	-.022	.102	.241**	.077	.112	-.145*	.162*
6. Inst. Supp.							-.066	.482**	.277**	.371**	.014	.152*	.195**	.062	.051	-.186**	.279**
7. B. Disengage.								.006	-.097	-.269**	.094	-.112	.000	.089	.283**	.345**	-.154*
8. Venting									.123	.290**	.050	.280**	.131	.180*	.155*	-.011	.091
9. Pos. Reframe										.418**	.245**	.296**	.174*	-.019	-.012	-.079	.316**
10. Planning											.151*	.497**	.123	.088	-.037	-.256**	.412**
11. Humour												.242**	.102	.187**	.010	.055	.159*
12. Acceptance													.046	.047	.013	-.090	.275**
13. Religion														.115	.065	-.077	.085
14. Self-blame															.309**	.125	-.090
15. Em. Ex.																.425**	-.243**
16. Depers.																	-.369**
17. Pers. Accom.																	

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

### ***12.2.5 Burnout and Physical Symptoms***

A number of physical symptoms including cardiovascular problems, insomnia and fatigue have been found to be closely related to burnout. In the current study, 12 physical symptoms were assessed: Upset stomach, trouble sleeping, headache, acid indigestion or heartburn, eye strain, diarrhoea, stomach cramps, constipation, ringing in the ears, loss of appetite, dizziness, tiredness or fatigue.

Spearman's rho was used to examine correlations between the 12 physical symptoms and the three dimensions of burnout as the variables were not normally distributed. Results of the analysis are presented in table 15.12. A number of significant correlations of varying directions and sizes between physical and burnout dimensions were identified. Emotional exhaustion in particular was related to a large number of physical symptoms. The relationship between burnout and physical symptoms will be explored in more detail in the Discussion.



Table 15.12.

*Spearman Correlations between Physical Symptoms and Burnout Dimensions.*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Upset stomach		.282**	.200**	.301**	.145*	.368**	.490**	.166*	.123	.350**	.304**	.268**	.341**	.189**	-.170*
2. Troub. Sleep.			.236**	.202**	.175*	.185*	.288**	.112	.156*	.296**	.286**	.436**	.413**	.142*	-.211**
3. Headache				.254**	.159*	.122	.158*	.140	.160*	.194**	.327**	.371**	.330**	.056	-.066
4. Acid indig.					.233**	.130	.170*	.065	.067	.156*	.244**	.225**	.294**	.174*	-.106
5. Eye strain						.085	.280**	.207**	.291**	.110	.264**	.354**	.328**	.173*	-.160*
6. Diarrhoea							.524**	.296**	.024	.198**	.196**	.082	.214**	.151*	-.105
7. Stom. cramps								.318**	.164*	.329**	.412**	.234**	.283**	.251**	-.150
8. Constipation									.229**	.080	.268**	.155*	.119	.068	.039
9. Ringing in ears										.170*	.197**	.225**	.219**	.109	-.028
10. Loss of app.											.359**	.227**	.252**	.058	-.079
11. Dizziness												.294**	.279**	.113	-.064
12. Tiredness/fatigue													.600**	.237**	-.193**
13. Em. Ex.														.425**	-.243**
14. Depers.															-.369**
15. Pers. Accom.															

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

### 15.3 Multivariate Analyses

In order to further clarify relationships between the various independent and dependent variables, multivariate analyses were conducted. Multiple regressions were employed in order to assess the extent to which independent variables accounted for the variance in the three dependent variables, and also to establish the unique contributions of each independent variable in predicting each DV.

A number of assumptions about the data must be met in order for multiple regression to be suitably performed (Berry, 1993). Firstly, all predictor variables must either be continuous or dichotomous, while the outcome variable must be quantitative, continuous and unbounded (Field, 2005). Predictor variables must also be assessed for multicollinearity – high correlations between predictors. In the current analysis correlations between variables did not exceed maximum recommended values, i.e. values greater than 0.7/0.8 (Field, 2005). Assumptions in relation to sample size and outliers were also satisfactorily met. Assumptions on normality of residuals, linearity and homoscedasticity were assessed and deemed to have been met (see Appendix).

Results for multiple regression analyses for each category and for each of the three dependent variables are presented in turn below. That is, separate regression analyses were performed assessing how well individual difference variables, work environment factors and coping strategies predicted each dimension. The significant predictors emerging from these analyses were then entered into equations assessing how well they predicted emotional exhaustion, depersonalisation and personal accomplishment. This method was chosen in order

to facilitate comparison on variables within the same category and also to reduce problems associated with multicollinearity in the final analyses.

## **15.4 Results of Multivariate Analysis by Dependent Variable**

### ***15.4.1 Individual Differences and Emotional Exhaustion***

Bivariate analysis revealed that four individual difference variables were significantly correlated with emotional exhaustion: extraversion, neuroticism, teacher self-efficacy and core self-evaluations. These variables were entered into a multiple regression to assess their ability to predict levels of emotional exhaustion.

The four independent variables accounted for 33.5% of the variance in emotional exhaustion  $F(4, 191) = 23.51, p < .001$ . The individual contributions of each predictor are presented below in table 15.13.

Two individual difference factors were found to significantly predict emotional exhaustion. Neuroticism was found to be a significant positive predictor ( $\beta = .29, p < .001$ ), explaining 5.2% of the variance in emotional exhaustion. Core self-evaluations was found to be a significant negative predictor of emotional exhaustion ( $\beta = -.28, p < .001$ ), explaining 4.7% of the variance.

Table 15.13

*Regression Coefficients for Individual Difference Predictors of Emotional Exhaustion*

	<i>B</i>	<i>SE B</i>	$\beta$	<i>P</i>
Constant	49.29	8.48		<.0005
Extraversion	-.15	.13	-.08	.25
Neuroticism	.56	.15	.29	<.0005
TSE	-.18	.14	-.08	.20
CSE	-.48	.13	-.28	<.0005

**12.4.2 Work Environment and Emotional Exhaustion**

Bivariate analysis revealed significant correlations between seven work environment variables and emotional exhaustion. These variables were entered into a standard multiple regression to assess their contribution to the variance in emotional exhaustion.

The seven independent variables collectively accounted for 17% of the variance in emotional exhaustion  $F(7, 191) = 5.37, p < .001$ . The individual contributions of each predictor are presented below in table 15.14.

Three of the work environment variables were found to significantly and negatively predict variance in emotional exhaustion. Classroom order and organisation ( $\beta = -.18, p < .05$ ), explained 2.5% of the variance. Student relations ( $\beta = -.16, p < .05$ ) explained 2% of the variance and staff collaboration ( $\beta = -.19, p < .05$ ) explained 1.9% of the variance in emotional exhaustion.

Table 15.14.

*Regression Coefficients for Work Environment Predictors of Emotional Exhaustion*

	<i>B</i>	<i>SE B</i>	$\beta$	<i>P</i>
Constant	61.80	6.68		<.0005
Collaboration	-.48	.24	-.19	.04
Student Rel.	-.51	.24	-.16	.04
School Resources	-.20	.22	-.07	.37
Decision Making	-.05	.30	-.01	.86
Instructional Inn.	.28	.34	.07	.41
Cooperation	-.25	.28	-.06	.37
Order & Org.	-.54	.23	-.18	.02

**15.4.3 Coping and Emotional Exhaustion**

Bivariate analysis of the relationship between coping strategies and emotional exhaustion identified five significant correlations. Standard multiple regression was used to assess their contribution factors to the variance in emotional exhaustion.

The five independent variables collectively accounted for 21% of the variance in emotional exhaustion  $F(5, 191) = 9.89, p < .001$ . The individual contributions of each predictor are presented below in table 15.15.

Three of the coping variables were found to significantly and positively predict emotional exhaustion. Self-blame ( $\beta = .23, p < .001$ ) explained 5.2% of the variance, denial ( $\beta = .23, p < .05$ ) explained 2.9% of the variance and behavioural disengagement ( $\beta = .19, p < .05$ ) explained 2.6% of the variance in emotional exhaustion.

Table 15.15

*Regression Coefficients for Coping Predictors of Emotional Exhaustion*

	<i>B</i>	<i>SE B</i>	$\beta$	<i>P</i>
Constant	7.11	3.58		.05
Denial	2.07	.79	.20	.01
Substance Use	.55	.62	.06	.37
Behavioural Dis.	2.14	.87	.19	.02
Venting	.70	.50	.09	.16
Self-Blame	1.69	.48	.23	<.0005

**15.4.4 Final Predictors of Emotional Exhaustion**

Multiple regressions for each category of predictor variable yielded eight significant predictors of emotional exhaustion. These variables were entered into a further standard multiple regression to assess their contribution to the variance in emotional exhaustion. In order to check for multicollinearity, correlations between variables were assessed and values were deemed to be acceptable (see Appendix for table). All assumptions were satisfactorily met.

The eight variables collectively accounted for 40.5% of the variance in emotional exhaustion  $F(8, 191) = 15.6, p < .001$ . The individual contributions of each predictor are presented in table 15.16.

Table 15.16.

*Regression Coefficients for Predictors of Emotional Exhaustion*

	<i>B</i>	<i>SE B</i>	$\beta$	<i>P</i>
Constant	35.30	8.93		<.0005
Neuroticism	.65	.14	.33	<.0005
Core Self-Evaluations	-.23	.15	-.14	.11
Collaboration	-.32	.16	-.13	.04
Student Relations	-.42	.20	-.13	.04
Order & Organisation	-.16	.21	-.05	.46
Denial	1.02	.72	.10	.16
Behavioural Disen.	1.18	.78	.10	.13
Self-Blame	.37	.47	.05	.43

Three variables were found to significantly predict emotional exhaustion. The personality trait of neuroticism was a positive predictor ( $\beta = .33$ ,  $p < .001$ ), explaining 6.6% of the variance. Collaboration with colleagues was a negative predictor of emotional exhaustion ( $\beta = -.13$ ,  $p < .05$ ), explaining 1.4% of the variance. Student relations was another negative predictor ( $\beta = -.13$ ,  $p < .05$ ), explaining 1.4% of the variance in emotional exhaustion.

#### **15.4.5 Individual Differences and Depersonalisation**

Six individual difference variables were found to significantly correlate with depersonalisation. Extraversion, agreeableness, conscientiousness, neuroticism, teacher self-efficacy and core self-evaluations were each entered into a standard multiple regression to assess their contribution to the variance in depersonalisation.

The six independent variables collectively accounted for 29.8% of the variance in depersonalisation  $F(6, 191) = 13.07, p < .001$ . The individual contributions of each predictor are presented in table 15.17

Table 15.17

*Regression Coefficients for Individual Difference Predictors of Depersonalisation*

	<i>B</i>	<i>SE B</i>	$\beta$	<i>P</i>
Constant	38.22	4.73		<.0005
Extraversion	-.15	.06	-.18	.02
Neuroticism	-.12	.07	-.14	.09
TSE	-.06	.06	-.06	.36
CSE	-.35	.06	-.47	<.0005
Agreeableness	-.12	.08	-.10	.15
Conscientiousness	.01	.07	.01	.85

Thus, two individual difference factors were found to significantly predict depersonalisation. Core self-evaluations was found to be the strongest negative predictor of depersonalisation ( $\beta = -.47, p < .001$ ), explaining 11.22% of the



variance. Extraversion was found to be a significant negative predictor ( $\beta = -.18$ ,  $p < .05$ ), explaining 2.3% of the variance.

#### **15.4.6 Work Environment and Depersonalisation**

Six work environment variables were found to have significant bivariate correlations with depersonalisation. Standard multiple regression was used to assess the contribution of these variable to the variance in depersonalisation.

The six independent variables collectively accounted for 22.8% of the variance in depersonalisation  $F(6, 191) = 9.10$ ,  $p < .001$ . The individual contributions of each predictor are presented below in table 15.18.

Table 15.18.

*Regression Coefficients for Work Environment Predictors of Depersonalisation*

	<i>B</i>	<i>SE B</i>	$\beta$	<i>P</i>
Constant	33.88	4.23		<.0005
Student Rel.	.04	.10	.30	.69
Decision Making	-.20	.12	-.12	.11
Instructional Inn.	-.03	.13	-.02	.81
Cooperation	-.11	.12	-.07	.33
Order and Org.	-.47	.10	-.36	<.0005
Interactions	-.37	.15	-.17	.01

Two of the work environment variables were found to significantly and negatively predict variance in depersonalisation. Classroom order and organisation ( $\beta = -.36$ ,  $p < .001$ ) explained 9.5% of the variance and classroom interactions ( $\beta = -.17$ ,  $p < .05$ ) explained 2.6% of the variance in depersonalisation.

#### **15.4.7 Coping and Depersonalisation**

Bivariate analysis revealed significant correlations between six coping variables and depersonalisation. These variables were entered into a standard multiple regression to assess their contribution to the variance in depersonalisation.

The six independent variables collectively accounted for 26% of the variance in depersonalisation  $F(6, 191) = 10.83$ ,  $p < .001$ . The individual contributions of each predictor are presented below in table 15.19.

Table 15.19

#### *Regression Coefficients for Coping Predictors of Depersonalisation*

	<i>B</i>	<i>SE B</i>	$\beta$	<i>P</i>
Constant	7.87	2.34		<.0005
Active	-.10	.27	-.03	.71
Denial	.49	.34	.11	.15
Emotional Supp.	.01	.25	.00	.98
Instrumental Supp.	-.22	.29	-.08	.45
Behavioural Dis.	1.93	.40	.38	<.0005
Planning	-.24	.30	-.07	.43

Just one of the coping factors was found to significantly predict variance in depersonalisation. Behavioural disengagement was a significant positive predictor ( $\beta = .38, p < .001$ ), predicting 9.1% of the variance.

#### ***15.4.8 Final Predictors of Depersonalisation***

Five significant predictors of depersonalisation were identified in the initial phase of multiple regressions. These predictors as well as years of experience, which had a significant bivariate correlation with depersonalisation, were entered into a standard multiple regression to assess their contribution to the variance in depersonalisation.

The six variables collectively accounted for 42% of the variance in depersonalisation  $F(6, 191) = 22.30, p < .001$ . The individual contributions of each predictor are presented in table 15.20.

Three variables were found to significantly predict depersonalisation. The coping strategy of behavioural disengagement was a positive predictor of depersonalisation ( $\beta = .30, p < .001$ ), explaining 7.5% of the variance. Core self-evaluations negatively predicted depersonalisation ( $\beta = -.25, p < .05$ ), explaining 4.2% of the variance. Classroom order and organisation was another negative predictor ( $\beta = -.17, p < .05$ ), explaining 2.2% of the variance in depersonalisation.

Table 15.20.

*Regression Coefficients for Predictors of Depersonalisation*

	<i>B</i>	<i>SE B</i>	$\beta$	<i>P</i>
Constant	29.48	3.94		<.0005
Years of Experience	-.03	.03	-.06	.31
Extraversion	-.10	.05	-.12	.07
Core Self-Evaluations	-.19	.05	-.25	<.0005
Interactions	-.25	.13	-.11	.053
Order & Organisation	-.23	.09	-.17	.01
Behavioural Disen.	1.51	.31	.30	<.0005

#### **15.4.9 Individual Differences and Personal Accomplishment**

Bivariate analysis revealed that all seven individual difference variables were significantly correlated with personal accomplishment. These variables were entered into a standard multiple regression to assess their ability to predict levels of personal accomplishment.

The seven independent variables collectively accounted for 46% of the variance in personal accomplishment  $F(7, 191) = 22.42, p < .001$ . The individual contributions of each predictor are presented in table 15.21.

Table 15.21.

*Regression Coefficients for Individual Difference Predictors of Personal Accomplishment*

	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>P</i>
Constant	-7.04	6.15		.25
Extraversion	.19	.08	.16	.02
Neuroticism	.12	.09	.10	.15
Agreeableness	.20	.10	.12	.049
Conscientiousness	-.01	.09	-.01	.89
Openness	.14	.07	.11	.05
TSE	.57	.08	.43	<.0005
CSE	.28	.08	.26	<.0005

Four of the individual difference factors were found to significantly and positively predict variance in personal accomplishment. Teacher self-efficacy was the

strongest predictor ( $\beta = .43, p < .001$ ), explaining 14.7% of the variance. Core self-evaluations ( $\beta = .29, p < .001$ ) explained 3.5% of the variance, extraversion ( $\beta = .16, p < .05$ ) explained 1.8% of the variance and agreeableness ( $\beta = .12, p < .05$ ) explained 1.1% of the variance in personal accomplishment.

#### ***15.4.10 Work Environment and Personal Accomplishment***

Seven work environment variables were found to have a significant bivariate correlation with personal accomplishment. Standard multiple regression was used to assess the contribution of these factors to the variance in personal accomplishment.

The seven independent variables collectively accounted for 37.5% of the variance in depersonalisation  $F(7, 191) = 15.80, p < .001$ . The individual contributions of each predictor are presented below in table 15.22.

Two of the work environment variables were found to significantly and positively predict variance in personal accomplishment. Classroom interactions ( $\beta = .46, p < .001$ ) explained 18.3% of the variance and classroom order and organisation ( $\beta = .23, p < .001$ ) explained 3.5% of the variance in personal accomplishment.

Table 15.22

*Regression Coefficients for Work Environment Predictors of Personal Accomplishment*

	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>P</i>
Constant	-8.63	5.70		.13
Student Rel.	.18	.13	.09	.17
Decision Making	.13	.16	.05	.43
Instructional Inn.	.14	.16	.06	.40
Cooperation	.05	.15	.02	.72
Order & Org.	.42	.13	.23	<.0005
Interactions	1.41	.19	.46	<.0005
Task Orientation	-.06	.14	-.03	.68

#### **15.4.11 Coping and Personal Accomplishment**

Bivariate analysis found nine significant correlations between coping factors and personal accomplishment. These variables were entered into a standard multiple regression to assess their contribution to the variance in personal accomplishment.

The nine independent variables collectively accounted for 27.7% of the variance in personal accomplishment  $F(9, 191) = 7.74, p < .001$ . The individual contributions of each predictor are presented below in table 15.23.

Table 15.23

*Regression Coefficients for Coping Predictors of Personal Accomplishment*

	<i>B</i>	<i>SE B</i>	$\beta$	<i>P</i>
Constant	24.80	3.46		<.0005
Active	1.39	.39	.29	<.0005
Denial	-1.22	.49	-.19	.01
Emotional Supp.	-.15	.35	-.04	.67
Instrumental Supp.	.65	.41	.16	.12
Behavioural Dis.	.59	.57	.08	.30
Pos. Reframing	.31	.32	.07	.33
Planning	.60	.47	.12	.20
Use of Humour	.33	.29	.08	.25
Acceptance	.21	.39	.04	.58

Two of the coping variables were found to significantly predict variance in personal accomplishment. Active coping was a positive predictor ( $\beta = .29$ ,  $p < .001$ ), explaining 5% of the variance. Denial coping was a negative predictor ( $\beta = -.19$ ,  $p < .05$ ), explaining 2.5% of the variance in personal accomplishment.

**15.4.12 Final Predictors of Personal Accomplishment**

Multiple regressions for each category of predictor variable yielded eight significant predictors of personal accomplishment. These variables were entered into a further standard multiple regression to assess their contribution to the variance in emotional exhaustion.



The eight variables collectively accounted for 54.9% of the variance in personal accomplishment  $F(8, 191) = 27.82, p < .001$ . The individual contributions of each predictor are presented in table 15.24.

Table 15.24.

*Regression Coefficients for Predictors of Personal Accomplishment*

	<i>B</i>	<i>SE B</i>	$\beta$	<i>P</i>
Constant	-13.29	5.00		.01
Extraversion	.16	.07	.14	.02
Agreeableness	.03	.10	.02	.80
Teacher Self-Efficacy	.41	.08	.31	<.0005
Core Self-Evaluations	.12	.07	.11	.09
Interactions	.88	.19	.28	<.0005
Order & Organisation	.28	.11	.15	.01
Active	.64	.27	.13	.02
Denial	-.14	.35	-.02	.68

Five variables were found to significantly and positively predict personal accomplishment. Teacher self-efficacy ( $\beta = .31, p < .001$ ) uniquely explained 6.7% of the variance in personal accomplishment. Classroom interactions predicted personal accomplishment ( $\beta = -.25, p < .001$ ), explaining 5.5% of the variance. Classroom order and organisation ( $\beta = .15, p < .05$ ), explained 1.8% of the variance, active coping ( $\beta = .13, p < .05$ ), explained 1.4% of the variance and extraversion ( $\beta = .14, p < .05$ ) explained 1.4% of the variance in personal accomplishment.

## **16. Discussion**

In this chapter the results of both the qualitative and quantitative studies will be discussed and findings will be interpreted in light of previous research. Firstly, the results of the focus group study, the relationship of findings to those outlined in the literature review and how they informed the survey phase of study will be discussed and appraised. Next, results of the survey relating to each of the dependent variables – emotional exhaustion, depersonalisation and personal accomplishment – will be presented and discussed in turn. Implications of the results, limitations of the study and possibilities for future research will be discussed.

### **16.1 Discussion of Qualitative Study**

Thematic analysis of focus group discussions with a sample of second level teachers yielded valuable information on their experiences, both positive and negative, in the course of their work and how these experiences were perceived to influence the development of stress and burnout. Environmental, personal and demographic factors were all identified and discussed by participants and the issues identified were largely reflective of those outlined in the literature review. However, a number of novel issues also emerged, particularly in relation to the difficulties experienced by younger teachers in securing employment. Thematic analysis

facilitated the creation of a number of categories which will be discussed in turn below.

#### ***16.1.1 School and Classroom Environment***

It is evident that Irish teachers experience a wide variety of potential stressors in the course of their work, particularly in relation to interactions with management, colleagues, students and parents. Overall, findings were largely in line with those of previous studies, as outlined in the literature review. Aspects of both school and classroom environments were identified as contributors to occupational stress. For example, factors such as heavy workload and problematic relations with students, identified in previous research conducted in Ireland (Kerr, Breen, Delaney & Miller, 2011; Wynne, Clarkin & Dolphin, 1991), were again found to be of apparent importance in stress development.

Analysis of focus group discussions suggests that school environment has an important bearing on the experience of individual teachers. Specifically, those individuals teaching in schools with an open, collaborative environment appeared to find their work less stressful than those working in schools with 'difficult' principals and divisions among staff. This supports previous research on the importance of a positive school environment in protecting against absenteeism and stress (e.g. Friedman, 1991; Kieschke & Schaarschmidt, 2008).

It is apparent that relationships with colleagues and management are key factors in shaping the type of working atmosphere within participants' schools.

Colleague support was identified by Byrne (1994) as an important factor in burnout development, and difficult relations with school administrators have been found to predict stress and burnout in teachers (e.g. Cano-Garcia et al., 2005). Positive aspects of the school environment identified by participants included collaboration with colleagues, participation in decision making and receiving support from colleagues and management. These positive aspects mirror those identified by Dorman's (2003) study conducted with a sample of Australian teachers.

In relation to the classroom environment, much discussion centred on student discipline and motivation. In the literature review, these factors were identified as predictors of each dimension of burnout. Problematic relations with students are routinely identified as significant contributors in studies of teacher burnout (e.g. Hakanen et al., 2006; Kokkinos, 2007). Several of those participants in the current study who experienced high levels of student misbehaviour described how engaging in 'crowd control' left them suffering frustration and exhaustion.

Byrne (1994) identified student academic orientation as one of the core facets shaping teacher perceptions of classroom climate. In the current study, those teachers who perceived their students as being unmotivated towards their work described feelings of frustration, in some cases eventually leading these participants to reduce their engagement and effort with their students. While direct comparison is not possible, this process of disengagement is similar in character to the burnout dimension of depersonalisation. Anecdotally at least, the findings of the focus group study suggest potential links between classroom climate and burnout dimensions.

The perceived importance of students' socioeconomic background in shaping the teaching experience was notable in the current study and has been discussed in previous research (e.g. Kyriacou, 2001). However, the Irish report on the recent Teaching and Learning International Survey failed to find any significant link between a school's socioeconomic designation and teacher-student relations (Shiel, Perkins & Gillece, 2009). An item on socioeconomic status was included in the survey in an attempt to clarify this apparent contradiction.

#### ***16.1.2 Personal, Demographic and Other Factors***

As well as identifying important environmental factors, thematic analysis of the focus group discussions yielded information on the perceived role of demographic and personal characteristics in stress and burnout. Findings suggest that some individuals are better equipped than others to successfully negotiate the challenges they face in the course of their work, depending on their personal circumstances. For example, it was suggested by participants that personality is important in both appraisal of potentially stressful work events and coping with them, in line with previous research (e.g. Kaplan, 1996). It appeared that some teachers were more inclined than others to identify environmental challenges as stressors and experience more difficulty in coping with these stressors. Specifically, those who were able to 'just get on with it' appeared to be seen as the most adaptive in terms of dealing with stress.

In relation to demographic factors, age and experience appeared to have an influence on the experience of individual teachers. Numerous studies have investigated age-related variation in burnout and Maslach's review (2001) concluded that younger workers were more likely to report high levels of burnout than more experienced colleagues. However, this relationship is somewhat open to question, and numerous studies have found no link between age/experience and burnout (e.g. Cano-Garcia, 2005; Kokkinos, 2006).

Among focus group participants, younger teachers and those nearing retirement appeared to face greater challenges than those in their teaching 'middle age'. Older participants suggested that their energy levels and enthusiasm for their work had begun to wane, which in turn appeared to impact upon their levels of job satisfaction. Younger, less experienced teachers faced a number of major challenges. The major issue faced by this group appeared to be the lack of employment opportunities and job security. Related to this was the perceived need to work harder in order to 'make an impression' and hopefully earn another contract. As Ireland has a higher percentage of young teachers in comparison to many other countries (OECD, 2012), the issues outlined above could be particularly prevalent here. As a result, items on age, experience and contractual status were included in the survey in order to further explore their role in stress and burnout.

### ***16.1.3 Conclusions, Limitations and Implications***

The stated aims of the study have been satisfactorily met – clearer understanding of the experiences of teachers and the factors they perceive as being important in stress development has been gained. Participants described the environmental, demographic and personal factors that influence their experience of occupational stress, providing valuable insights into a cohort of people who have previously received scant research attention. This process also helped inform the creation of a survey to further explore the process of stress development in Irish second level teachers.

Overall the issues highlighted by participants were broadly in line with those outlined in the literature review. In general, it appeared that most participants were quite satisfied with their job; however they did face a number of challenges which contributed to feelings of stress. For those participants who had experienced high levels of stress there were severe emotional, physical and occupational consequences. Several participants described the exhaustion they experienced as a result of stress, with one participant requiring medical assistance to cope. Two other participants described resigning their posts due to the sustained stress and frustration they experienced within the schools they were teaching in. Thus, while the majority of participants appeared relatively unaffected by severe stress, those who did experience it were faced with considerable negative consequences.

While the aims of the study were satisfactorily met, it is important to note its limitations. As the number of participants was limited it is possible that some factors important in stress development were missed or under-reported. For

example, it has been suggested that the environmental stressors experienced by participants are more easily identified and discussed than personality traits and coping styles in the focus group setting (Gillespie et al., 2001). As outlined in the literature review, these factors play an important role in stress and burnout development. Thus, it is not possible to conclusively assess the importance of an individual factor based solely on the amount of times it was mentioned by participants. More comprehensive analysis would be required to test such an assumption. Finally, it is also important to avoid extrapolating too widely from the experience of a small group of teachers recruited in a relatively limited geographical area.

In conclusion, this focus group study has once more suggested that the issue of stress and burnout within Irish second level schools requires attention. It was quite clear that those participants who had experienced severe stress and burnout had been greatly and adversely affected by their experiences, in many cases with knock-on effects on their commitment to their work. Despite the limitations outlined above, this focus group study has gathered valuable information with which to proceed to further study and the potential development of interventions designed to enhance the experiences of Irish second level teachers.



## **16.2 Discussion of Survey Results by DV**

Discussion of the results of the survey study will be organised according to each of the three dependent variables. For each dependent variable the results will be discussed initially according to each category of predictor (i.e. work environment, individual differences) before concluding with an overall discussion of results for each DV.

### ***16.2.1 Emotional Exhaustion***

Emotional exhaustion has been described as the earliest and most notable manifestation of burnout (Maslach et al., 2001) and along with depersonalisation has been characterised as forming the 'core' of burnout (Bakker, Demerouti & Verbeke, 2004). A review of the available literature suggested that a range of factors could potentially contribute to feelings of emotional exhaustion in teachers. Individual difference factors, work environment, coping and demographic factors have all been identified as potential predictors. The results for each category of predictor will be discussed in turn below.

#### *Individual Differences and Emotional Exhaustion*

Individual difference factors including the big five personality traits, core self-evaluations and situation-specific self-efficacy have been identified in the literature as significant predictors of emotional exhaustion. Based on the literature review, it

was hypothesised that neuroticism would positively predict emotional exhaustion, while extraversion, core self-evaluations and teacher self-efficacy would negatively predict emotional exhaustion.

Bivariate analysis supported the significance and direction of these relationships, with neuroticism and core self-evaluations in particular having relatively strong correlations with emotional exhaustion. Multiple regression analysis yielded further information on the predictive ability of the four factors. The model as a whole was significant, explaining 33.5% of the variance in emotional exhaustion. Neuroticism and core self-evaluations were found to be significant unique predictors, explaining 5.2% and 4.7% of the variance respectively. As hypothesised, neuroticism was a positive predictor and core self-evaluations a negative predictor of emotional exhaustion.

Neuroticism is a personality trait characterised by anxiety, depressed mood, envy and frustration (Costa & McCrae, 1992). It has consistently found to positively predict emotional exhaustion, both in teachers and workers in other occupations. A recent meta-analysis of 121 papers on the links between personality variables and burnout found that neuroticism was a particularly strong predictor of emotional exhaustion in comparison to other personality traits (Alarcon, Eschleman & Bowling, 2009). Research specific to teachers has also consistently found strong links between neuroticism and emotional exhaustion. Findings by Kokkinos (2007) in a Cypriot sample of teachers and Cano-Garcia and colleagues (2005) in a Spanish sample found neuroticism to predict emotional exhaustion even when controlling for other personality traits and environmental factors.

In order to understand and explain the strong relationship between neuroticism and emotional exhaustion it is necessary to examine the structure and nature of both constructs. Individuals high in neuroticism are prone to tension, worry and apprehension, tend to cope poorly with stress, and have a tendency to view events as threatening or problematic (Watson, Clark & Harkness, 1994). According to Lazarus and Folkman's (1984) transactional model the tendency to appraise workplace demands as threats rather than challenges is an important step in the process leading to the development of stress. Ineffective coping with this stress further exacerbates the problem, rendering burnout development far more probable. As emotional exhaustion is often the earliest and most notable manifestation of burnout (Maslach et al., 2001), it is not surprising that individuals high in neuroticism also tend to report high levels of emotional exhaustion. Another possible explanation for the relationship can be derived from Affective Events Theory (Weiss, 1996) which suggests that affective-oriented variables such as neuroticism and emotional exhaustion will yield stronger relationships with other affective-oriented variables than with non-affective variables.

Core self-evaluations (CSE) was found to have a large negative bivariate correlation with neuroticism in the current study ( $p = -.58$ ). Core self-evaluations refer to an individual's fundamental appraisal of their worthiness, effectiveness and capability as a person (Judge et al., 2003). Though CSE is a relatively new construct, a number of studies have demonstrated its links with job satisfaction and burnout. CSE was included in Alarcon and colleagues' meta-analysis (2009) and was found to be a significant predictor of emotional exhaustion, depersonalisation and

personal accomplishment. While each of the four constituent traits of CSE (self-efficacy, self-esteem, emotional stability and locus of control) have individually been found to relate to emotional exhaustion in various studies, no study has explored links between CSE as a whole and burnout in teachers. Thus, the finding in the current study that CSE significantly predicts emotional exhaustion in teachers is novel and provides further insight into the factors influencing burnout development.

CSE may influence emotional exhaustion through a number of mechanisms. Firstly, Stumpp et al. (2009) found that individuals high in CSE tend to have a more positive view of their workplace and higher levels of job satisfaction than their low-CSE colleagues. In addition, individuals with positive self-evaluations tend to be more likely to view their job as being important and meaningful than those with more negative self-evaluations. CSE also appears to be beneficial in terms of dealing with workplace demands and protecting and mobilising coping resources. Conservation of Resources Theory (Hobfoll, 1989) posits that loss of work-related resources (favourable conditions, social support, pay, etc.) results in negative consequences for individuals including stress and burnout. Harris and colleagues (2009) found that individuals with a positive self-concept appear to have additional buffers against resource loss, actual or threatened, compared to those with more negative self-concept. CSE is further related to coping in that it may influence the type of coping strategy an individual employs, with high-CSE individuals tending to use more adaptive styles than lower CSE individuals (Kammeyer-Mueller, Judge & Scott, 2009).

Two of the individual difference variables, extraversion and teacher self-efficacy, hypothesised to predict emotional exhaustion failed to make a significant contribution to the variance. In the case of extraversion, while studies have identified it as a significant predictor across occupations (Alarcon et al., 2009) and also specifically among teachers (Kokkinos, 2007), it is generally a weaker predictor than other traits such as neuroticism. Some studies have failed to find any significant relationship between extraversion and emotional exhaustion (e.g. Cano-Garcia et al., 2005). In the current analysis, a significant bivariate correlation was found between extraversion and emotional exhaustion. Thus, though it was not found to directly predict emotional exhaustion, it is possible that extraversion may relate to this dimension of burnout through an as yet unknown, indirect pathway.

Extraversion was found to have significant positive correlations with participant perceptions of collaboration with colleagues and teacher-student relations. Given the well-established importance of workplace relationships in burnout (e.g. Maslach et al., 2001), it is possible that extraversion's relationship with emotional exhaustion may be mediated by perceptions of workplace relationships. Highly extraverted teachers are more likely to have positive perceptions of these relationships than less extraverted teachers and are thus less likely to experience emotional exhaustion.

In the case of teacher self-efficacy, its bivariate correlation with emotional exhaustion was significant but small. While some previous research has suggested that teacher self-efficacy may directly predict burnout (e.g. Skaalvik & Skaalvik, 2007), studies by Betoret (2009) and Schwarzer and Hallum (2008) found that the

relationship between teacher self-efficacy and burnout is indirect, and mediated by job stressors. The contrasting findings of these studies could be explained by differences in their conceptualisation and measurement of teacher self-efficacy. Skaalvik and Skaalvik took a much broader, multidimensional approach rather than the unitary measure of the construct employed by Schwarzer and Hallum and the current study. In addition, Skaalvik and Skaalvik warned against making causal judgements based on their findings as their regression and structural equation analyses were designed in such a way as to allow self-efficacy predict burnout.

Teacher self-efficacy may be viewed as an internal coping resource that can potentially mitigate the impact of environmental stressors in the burnout development process. Thus while self-efficacy was not found to directly predict emotional exhaustion in the current study, it may still have had an indirect influence on it.

#### *Work Environment and Emotional Exhaustion*

Upon review of the literature on work environment, a number of school and classroom level factors were hypothesised as predictors of emotional exhaustion. School environment factors including staff consensus and affiliation, involvement in decision-making and relations with supervisors were hypothesised to negatively predict emotional exhaustion. A number of classroom-level factors were also expected to negatively predict emotional exhaustion. Specifically, those with

positive perceptions of student behaviour, motivation to work and classroom interactions are expected to report lower emotional exhaustion.

Bivariate analysis supported the significance and direction of these relationships, with both school and classroom level factors having significant correlations with emotional exhaustion. Multiple regression analysis yielded further information on the predictive ability of the seven correlated factors. The model as a whole was significant, explaining 17% of the variance in emotional exhaustion. Classroom order and organisation, student relations and staff collaboration were found to be significant unique predictors, explaining 2.5%, 2% and 1.9% of the variance respectively. As hypothesised, all three work environment factors were negative predictors of emotional exhaustion.

Student relations, as measured by the Revised School Level Environment Questionnaire (Johnson, Stevens & Zvoch, 2007) measures teacher perceptions of their relations with students in general, not just those that they teach. Though labelled as a school-level factor, survey items for this factor assess student motivation, cooperation and behaviour towards school staff so in effect the student relations factor spans both school and classroom levels. In addition, a number of school and classroom factors were found to significantly correlate with each other, and it is reasonable to assume that facets of both environments influence and relate to each other in a number of ways.

The quality and nature of relationships with students are almost ubiquitously cited as highly influential factors in studies of teacher stress. Studies carried out in Cyprus, Canada, Spain and indeed Ireland have highlighted the extent

to which problematic relations with students can be stressful and foster emotional exhaustion (Kokkinos, 2007; Byrne, 1994; Otero-Lopez et al., 2008; Kerr et al., 2011). The current study found that both classroom-level order and organisation and student relations at the wider school level were significant predictors of variance in emotional exhaustion.

Managing student misbehaviour, both within the classroom and beyond, places demands on the coping resources of teachers. In accordance with transactional models, those teachers with inadequate resources are more likely to suffer from the negative consequences of stress. In Skaalvik and Skaalvik's (2010) large Norwegian study, student discipline problems directly predicted emotional exhaustion and depersonalisation. Byrne (1994) also found that student behaviour in class and interactions with teachers were significant predictors of emotional exhaustion. The findings of these studies imply that as perceptions of student behaviour deteriorate, teachers become increasingly exhausted by their work, eventually developing negative attitudes towards their students and their profession.

In relation to the school-level environment, collaboration was found to significantly predict emotional exhaustion. This variable measures teacher perceptions of their coordination, communication and teamwork with their colleagues. Findings are somewhat in accordance with Friedman's (1991) study of high and low burnout schools in Israel. Friedman found that low burnout schools tended to have looser, more collaborative social structures than high burnout schools and that teachers tended to socialise with each other more regularly.



Byrne's (1994) findings in a Canadian sample suggested that social support from peers boosted self-esteem, providing a buffer against the negative effects of stress. More recent studies by Dorman (2003) and Otero-Lopez and colleagues (2008) have also found that staff affiliation and support negatively predict emotional exhaustion. The finding in the current study that staff collaboration plays a significant role in stress and burnout development supports the findings of previous research carried out in Ireland (Wynne et al., 1991).

Several hypothesised environmental predictors of emotional exhaustion failed to reach significance. In particular, involvement in decision-making was expected to be a significant negative predictor, as a number of previous studies have found it to have a relationship with burnout (e.g. Friedman, 1991; Byrne, 1994; Betoret, 2009). Involvement in decision-making had a significant but small bivariate correlation with emotional exhaustion but regression analysis found that it accounted for a negligible amount of the variance in emotional exhaustion. It is possible that the significant overlap between involvement and decision-making and other variables may account for its failure to reach significance. Any potential impact on emotional exhaustion may have been mediated by other variables.

While previous studies have suggested that either school environment (e.g. Dorman, 2003) or classroom environment (e.g. Byrne, 1994) are more important and direct predictors of emotional exhaustion, the current study has identified the importance of variables from both levels. Findings suggest that those teachers with positive perceptions of relations with both colleagues and students are less likely to report elevated levels of emotional exhaustion.

### *Coping and Emotional Exhaustion*

The type of coping strategy employed by individuals facing stressful situations can play an important role in governing whether or not burnout will develop. A review of the literature on coping facilitated the identification of several hypothetical predictors of emotional exhaustion. Specifically, emotional exhaustion was expected to be positively predicted by maladaptive coping such as substance use and avoidance or emotion-focused coping strategies. In contrast, problem-focused and active coping strategies were expected to be negative predictors.

Bivariate analysis identified five coping strategies significantly and positively correlated with emotional exhaustion – denial, substance use, behavioural disengagement, venting and self-blame. Multiple regression analysis yielded further information on the predictive ability of the five factors. The model as a whole was significant, explaining 21% of the variance in emotional exhaustion. Self-blame, denial and behavioural disengagement were found to be significant unique predictors, explaining 5.2%, 2.9% and 2.6% of the variance respectively. As hypothesised, all three coping strategies were positive predictors of emotional exhaustion.

Various categorisations of coping strategies have been made in the literature and the three predictors identified in the current study could variously be described as *emotion-focused*, *avoidant* or *maladaptive* styles of coping. Findings of the current study suggest that individuals who employ these coping strategies are more likely to report elevated levels of emotional exhaustion. These findings are in line with those of Beasley and colleagues (2003) and Leiter (1991). In terms of

previous studies specifically assessing coping strategies and burnout in teachers, findings are quite similar to those of Mearns and Cain (2003) who identified emotion-focused and avoidant coping as positive predictors of emotional exhaustion in a sample of American teachers.

While many studies, including a meta-analysis by Montgomery and Rupp (2005) have identified problem-focused or active coping styles as significant negative predictors of burnout, the current study failed to find even a significant bivariate correlation between such coping strategies and emotional exhaustion. However, findings are in line with those of Mearns and Cain (2003) who found no significant relationship between active or problem-focused coping and emotional exhaustion in teachers.

Mearns and Cain found that independent of how people actually cope with stressful events, having a strong belief about one's ability to cope makes one less vulnerable to the negative consequences of distress. Believing you have the capability to deal with negative experiences makes you feel better, even if you make no attempt to improve your mood. Thus, in order to explain the failure in the current study to find a significant relationship between active coping styles and emotional exhaustion, it is possible that internal resilience factors such as core self-evaluations are of more importance in preventing emotional exhaustion than the actual strategies employed when stressful events are encountered.

### *Demographic Variables and Emotional Exhaustion*

Previous studies of burnout in teachers have identified a number of potential demographic and school related contributors. Upon review of the literature, it was hypothesised that emotional exhaustion would have a negative relationship with teacher age and years of experience. A review of burnout literature by Maslach and colleagues (2001) suggested that younger workers tend to report higher levels of burnout than older, more experienced individuals. Potential relationships between emotional exhaustion and a number of other variables (e.g. sex, contractual status, etc.) were also examined.

Bivariate analysis failed to find a significant correlation between emotional exhaustion and age or years of experience. Potential differences in emotional exhaustion in relation to sex, contractual status, school type, school size, sex composition and DEIS designation were also assessed. No significant differences in emotional exhaustion were found depending on these variables.

### *Health and Emotional Exhaustion*

Research has repeatedly identified links between stress, burnout and health problems. A meta-analysis of 79 papers found a number of significant correlations between occupational stressors and physical symptoms (Nixon et al., 2011). Insomnia and gastrointestinal problems were found to relate to wide range of occupational stressors. A longitudinal Israeli study of stress, burnout and health in

teachers found that the experience of stress predicted somatic complaints over time (Shirom, Oliver & Stein, 2009).

Bivariate analysis of responses in the current study found that 11 of the 12 symptoms had significant positive correlations with emotional exhaustion. Most of these correlations ranged from small to medium but the two symptoms with the largest correlations were tiredness/fatigue and trouble sleeping, supporting previous findings suggesting a strong link between insomnia and burnout (e.g. Armon et al., 2008). This relationship is unsurprising given that depleted energy represents a core component of emotional exhaustion. Other symptoms including stomach upset, headache and eye-strain were each found to have medium significant correlations with emotional exhaustion. Due to the cross-sectional nature of the current research it is not possible to make causal judgements. However, current findings coupled with previous longitudinal research, suggest that elevated levels of emotional exhaustion can contribute to a range of physical symptoms.

### *Final Predictors of Emotional Exhaustion*

The final analysis of predictors of emotional exhaustion involved entering each of the significant factors identified above into a standard multiple regression. These factors as a whole accounted for 40.5% of the variance in emotional exhaustion. Neuroticism, collaboration with colleagues and student relations were found to be significant unique predictors, explaining 6.6%, 1.4% and 1.4% of the variance respectively.

These findings are in line with the general expectation that burnout is a product of both personal and environmental factors. As outlined in Lazarus and Folkman's transactional model (1984), job related strains such as burnout result from a transaction between the environmental demands placed on an employee and their appraisals of these demands. Previous studies of burnout in teachers have highlighted the important role of both personality traits and environmental factors in predicting emotional exhaustion (e.g. Cano-Garcia et al., 2005; Otero-Lopez et al., 2008).

As discussed previously, neuroticism is commonly identified as a strong predictor of emotional exhaustion both in teachers and beyond (e.g. Kokkinos, 2007). Individuals high in neuroticism are prone to tension, worry and apprehension, tend to cope poorly with stress, and have a tendency to view events as threatening or problematic (Watson, Clark & Harkness, 1994). Interestingly however, neuroticism was not significantly correlated with either of the work environment variables, suggesting that it may not have an influence on perceptions of the work environment as would be expected. Instead neuroticism either has a

direct relationship with emotional exhaustion or operates on it through some other mechanism.

Neuroticism was found to have significant positive bivariate correlations with each of the three coping strategies included in the analysis. Previous research has suggested a strong influence of neuroticism on coping, and has been found to predict the use of emotion-focused approaches such as avoidance and venting (O'Brien & DeLongis, 1996; Watson & Hubbard, 1996). It is possible that this relationship may help explain the particularly strong relationship between neuroticism and emotional exhaustion, i.e. those individuals with high levels of neuroticism tend to employ ineffective coping strategies when dealing with stress.

In relation to the work environment variables, the importance of relationships with both colleagues and students in the experience of emotional exhaustion is highlighted. Given the volume of discussion devoted to these areas by focus group participants, it is not a surprising finding. In addition, research on environmental predictors of burnout in teachers has identified the protective effect of positive relationships on emotional exhaustion (e.g. Dorman, 2003; Byrne, 1994). Those teachers with a positive perception of their relationships with colleagues and students were less likely to experience elevated levels of emotional exhaustion. Individuals with negative perceptions of these relationships have an elevated risk of suffering from emotional exhaustion.

### **16.2.2 Depersonalisation**

Depersonalisation forms one of the 'core' constituents of burnout and is characterised by callous and negative attitudes towards one's job. It may be viewed as a response to emotional exhaustion whereby individuals affected distance themselves from their work (Maslach et al., 2001). Review of the available literature suggested that a range of factors could potentially contribute to feelings of depersonalisation in teachers. Individual difference factors, work environment, coping and demographic factors have all been identified in the literature as predictors. The results for each category of predictor will be discussed in turn below.

#### *Individual Differences and Depersonalisation*

Research has identified numerous individual difference factors including several of the big five personality traits, core self-evaluations and situation-specific self-efficacy as significant predictors of depersonalisation. Based on review of the literature, it was expected that neuroticism would positively predict depersonalisation, while conscientiousness, extraversion, core self-evaluations (CSE) and teacher self-efficacy would negatively predict depersonalisation.

Bivariate analysis supported the significance and direction of these relationships, with core self-evaluations in particular having a relatively strong correlation with depersonalisation. Agreeableness was also found to have a significant negative correlation with depersonalisation. The six correlated factors



were entered into a multiple regression analysis in order to assess their predictive ability. The model as a whole was significant, explaining 29.8% of the variance in depersonalisation. Core self-evaluations and extraversion were found to be significant unique predictors, explaining 11.2% and 2.3% of the variance respectively. As hypothesised, core self-evaluations and extraversion were both negative predictors of depersonalisation.

Core self-evaluations accounted for a considerable portion of the variance in depersonalisation, echoing the findings of previous studies. Alarcon and colleagues' meta-analysis (2009) found that CSE predicted 17% of the variance in depersonalisation across 121 studies. Given that CSE can be characterised as a coping resource, its negative relationship with depersonalisation is not surprising, as depersonalisation itself may be viewed as a type of coping mechanism in response to emotional exhaustion (Maslach et al., 1996). Individuals with positive core-self evaluations tend to have favourable views about their worthiness, effectiveness and capability as a person which in turn predisposes them to perceive the work environment favourably regardless of the objective nature of their jobs (Brunborg, 2008). In addition, several studies have found that employee CSE can influence the type of coping employed by individuals, with high-CSE workers tending to employ more adaptive strategies than low-CSE individuals, rendering them less likely to experience high levels of depersonalisation (e.g. Kammeyer-Mueller et al., 2009).

The other significant predictor of variance in depersonalisation was extraversion, again in line with the meta-analysis findings of Alarcon and colleagues

(2009). However, previous studies of burnout specifically among teachers have failed to identify extraversion as a significant predictor of depersonalisation (e.g. Cano-Garcia et al., 2005; Kokkinos, 2007). These studies have suggested that depersonalisation is instead predicted by other traits including neuroticism, conscientiousness and agreeableness. This is an interesting discrepancy, and warrants further investigation. In addition, the fact that neuroticism failed to significantly predict variance in depersonalisation in the current study runs contrary to the evidence in the literature. It is possible that the relatively large overlap between CSE and neuroticism may have contributed to its failure to reach significance.

#### *Work Environment and Depersonalisation*

Upon review of the literature on work environment, a number of school and classroom level factors were hypothesised to predict depersonalisation. School environment factors including staff consensus and affiliation, involvement in decision-making and relations with supervisors were hypothesised to negatively predict depersonalisation. A number of classroom-level factors are also expected to negatively predict depersonalisation. Specifically, those with positive perceptions of student behaviour, motivation to work and classroom interactions are expected to report lower depersonalisation.

Bivariate analysis supported the significance and direction of these relationships, with both school and classroom level factors having significant

correlations with depersonalisation. Multiple regression analysis yielded further information on the predictive ability of the six correlated factors. The model as a whole was significant, explaining 22.8% of the variance in depersonalisation. Classroom order and organisation and interactions were found to be significant unique predictors, explaining 9.5% and 2.6% of the variance respectively. As hypothesised, both work environment factors were negative predictors of depersonalisation.

Findings suggest that perceptions of classroom order and the quality of interactions within it influence the experience of depersonalisation. Teachers with positive perceptions of these factors are less likely to report elevated levels of depersonalisation. These findings are in line with numerous studies which have identified the important role of classroom climate in burnout. For example, Byrne (1994) identified classroom climate as a direct, negative predictor of depersonalisation, while in a recent study of over 2,000 Norwegian teachers, Skaalvik and Skaalvik (2010) found that classroom discipline problems significantly predicted depersonalisation. In contrast to findings by Dorman (2003) and Otero-Lopez and colleagues (2008) none of the school-level factors were found to significantly predict variance in depersonalisation. It is possible that national or cultural differences may account for this difference. There is a great deal of variation between education systems globally and the experiences of teachers are likely to vary accordingly. For example, Conway and colleagues (2009) in a comparative international study of teaching highlighted numerous important

differences in educational policy, training methods and expectations placed on teachers across nine countries.

Debate regarding the relative importance of school-level and classroom-level factors has existed for some time and the findings of the current study provide further insight into this discussion within the Irish context.

### *Coping and Depersonalisation*

A review of the literature on coping facilitated the identification of several hypothesised predictors of depersonalisation. Specifically, depersonalisation was expected to be positively predicted by maladaptive coping such as substance use and avoidance or emotion-focused coping strategies. In contrast, problem-focused and active coping strategies were expected to be negative predictors.

Bivariate analysis identified six coping strategies significantly and positively correlated with emotional exhaustion – active, denial, use of emotional support, use of instrumental support, behavioural disengagement and planning. Multiple regression analysis yielded further information on the predictive ability of the six factors. The model as a whole was significant, explaining 26% of the variance in depersonalisation. Behavioural disengagement was the only significant unique predictor, explaining 9.1% of the variance. As hypothesised, behavioural disengagement (which falls under the category of emotion-focused or avoidant coping) was a positive predictor of depersonalisation.

As discussed previously in relation to CSE, the finding that depersonalisation is significantly related to coping is not surprising given its nature. Behavioural disengagement as a coping strategy particularly resonates with the concept of depersonalisation as characterised by cynicism and withdrawal from work. Studies by Leiter (1991) and Beasley, Thompson and Davidson (2003) have found that avoidant coping styles tend to be associated with elevated levels of depersonalisation as well as higher levels of physical and psychological health problems. In contrast to previous studies however, the current study failed to find a significant predictive effect of more adaptive, problem-focused strategies on depersonalisation. As discussed in relation to emotional exhaustion, coping resources such as CSE may be more important than actual coping strategies in predicting burnout development.

#### *Demographic Variables and Depersonalisation*

Previous studies of burnout in teachers have identified a number of potential demographic and school related contributors. Upon review of the literature, it was hypothesised that depersonalisation would be significantly higher in males than females. Potential relationships between depersonalisation and a number of other variables (e.g. age, contractual status, etc.) were also examined.

Bivariate analysis revealed a small but significant negative correlation between years of experience and depersonalisation. While Maslach and colleagues' (2001) review of burnout suggested that younger participants report higher levels

of burnout, findings have generally found age differences in emotional exhaustion rather than depersonalisation. For example, a Chinese study found a negative correlation between years of experience and emotional exhaustion, but no such relationship with depersonalisation (Tang et al., 2001). Studies by Cano-Garcia and colleagues (2005) and Kokkinos (2006) also failed to find any significant age or experience-related difference in teacher depersonalisation scores.

It has been suggested that age and experience-related differences in burnout may be due to a survival bias or possibly due to development of improved coping mechanisms over time (Maslach et al., 2001). The finding that less experienced teachers report greater levels of stress and burnout appears to support the assertions made in the qualitative phase of study. Nevertheless, it is interesting that experience-related differences in depersonalisation were found among Irish teachers when studies elsewhere have failed to find an association.

Difference tests also revealed that as hypothesised, depersonalisation scores were significantly higher in males than females. Findings on sex differences in depersonalisation vary between studies, with a recent investigation of burnout in Australian teachers reporting males to have higher depersonalisation scores (McCormick & Barnett, 2011), while a Canadian study found the opposite pattern (Fernet et al., 2012). Lastly, studies carried out in Spain and Cyprus have failed to find any significant sex-related difference in teacher depersonalisation scores (Cano-Garcia et al., 2005; Kokkinos, 2006). Reviews of burnout tend to support the idea of sex differences in depersonalisation, with Maslach et al. (2001) suggesting there is a small tendency towards higher depersonalisation in men. Schaufeli and

Buunk (2003) suggest that this finding is in line with findings on other sex differences such as higher aggression in males and greater interest in taking a nurturing role among females.

The final difference identified in depersonalisation related to contractual status. Those individuals on temporary, short-term contracts had significantly higher depersonalisation scores than those on longer-term and permanent contracts. Focus group participants highlighted the stress associated with a lack of job security, an issue which appeared particularly prevalent among younger participants. The mean age of those with both short-term and longer-term temporary contracts was also significantly lower than that of participants on permanent contracts (see Appendix). Given Ireland's comparatively youthful body of teachers (OECD, 2012), it is possible that problems associated with depersonalisation could be particularly prevalent here.

### *Health and Depersonalisation*

Bivariate analysis found that 7 of the 12 symptoms assessed had significant positive correlations with depersonalisation. Most of these correlations ranged from small to medium but the two symptoms with the largest correlations were tiredness/fatigue and stomach cramps, supporting previous findings suggesting that trouble sleeping and stomach complaints were particularly associated with burnout (e.g. Armon et al., 2008).

Other correlated symptoms including stomach upset, acid indigestion and eye-strain each had small but significant positive correlations with depersonalisation. Obviously due to the cross-sectional nature of the current research it is not possible to make causal judgements. However, current findings coupled with previous longitudinal research, suggest that feeling elevated levels of depersonalisation can contribute to experiencing a range of physical symptoms.



### *Final Predictors of Depersonalisation*

The final analysis of predictors of depersonalisation involved entering each of the significant factors identified above into a standard multiple regression. These factors as a whole accounted for 41.6% of the variance in depersonalisation. Behavioural disengagement, core self-evaluations and classroom order and organisation were found to be significant unique predictors, explaining 7.7%, 4.1% and 2.7% of the variance respectively.

Therefore, the pattern of predictors includes environmental, personal and coping variables. It is not surprising that behavioural disengagement was found to be the strongest predictor of depersonalisation due to their conceptual similarity. Both constructs relate to a withdrawal of engagement in response to negative experiences with either stressful situations or emotional exhaustion. Avoidant coping styles such as behavioural disengagement have previously been found to predict physical and mental health problems (Beasley et al., 2003), including depersonalisation (Leiter, 1991). Evidently behavioural disengagement is an ineffective strategy for coping with stress, and the employment of such an approach appears to have a considerable relationship with the of experience depersonalisation.

Core self-evaluations (CSE) was the second strongest predictor of depersonalisation. CSE has been found to be a beneficial coping resource, with high core self-evaluations having been found to buffer the effect of resource-loss on individuals (Harris et al., 2009). In addition CSE may influence the coping strategies employed by individuals encountering stressful events. Kammeyer-Mueller and

colleagues (2009) found that employees with high CSE tend to use less avoidance coping and more problem-solving coping than those with low CSE.

The final significant predictor was classroom-level order and organisation. Findings suggest that perceptions of classroom order and the quality of interactions within it influence the experience of depersonalisation, i.e. those with a positive view of classroom order and organisation are less likely to experience depersonalisation. As discussed previously, a number of studies have identified the important role of classroom climate in depersonalisation (e.g. Byrne, 1994; Skaalvik & Skaalvik, 2010). While some studies have identified school-level factors as being more significant influence on depersonalisation than classroom-level factors (e.g. Dorman, 2003; Otero-Lopez et al., 2008), none of the school-levels factors in the current study reached significance. As discussed by Dorman (2003) teachers spend the majority of their time at work within the classroom environment and it is presumably in this domain that the disengagement and callous attitudes towards others characteristic of depersonalisation manifest themselves.

Thus, disorganised and disordered classrooms appear to foster increased cynicism and disengagement among Irish secondary teachers, in conjunction with negative self-evaluations and the use of avoidant coping strategies.

### **16.2.3 Personal Accomplishment**

Personal accomplishment is a burnout dimension measuring an individual's personal evaluations in relation to their job. Those with a reduced sense of personal accomplishment may feel dissatisfied with their work-related accomplishments (Maslach et al., 2001). A number of burnout researchers have cast doubt on the place of personal accomplishment within burnout, with some removing the dimension from their measurement instruments (e.g. Skaalvik & Skaalvik, 2010). However, the majority continue to include the personal accomplishment dimension and a variety of predictive factors have been identified among teachers and other occupations (Schaufeli & Enzmann, 1998).

#### *Individual Differences and Personal Accomplishment*

Based on a review of the literature, it was hypothesised that personal accomplishment would be positively predicted by conscientiousness, extraversion, core self-evaluations and teacher self-efficacy. It was also hypothesised that personal accomplishment would be negatively predicted by neuroticism.

Bivariate analysis revealed that each of the seven individual difference variables were significantly correlated with personal accomplishment. When these variables were entered into a multiple regression they were found to account for 46% of the variance, with teacher self-efficacy (14.7%), core self-evaluations (3.5%), extraversion (1.8%) and agreeableness (1.1%) all making significant unique contributions to the variance.

The results of Alarcon and colleagues' (2009) meta-analysis are very similar to the findings of the current study. Self-efficacy, core self-evaluations and extraversion each had considerable relationships with personal accomplishment, while agreeableness was a significant but weaker predictor. Neuroticism and conscientiousness were not found to be significant predictors of personal accomplishment in the current study, in contrast to the findings of the meta-analysis.

The strength of the relationship found between self-efficacy and personal accomplishment is not surprising given that many researchers consider there to be considerable conceptual overlaps between the two. For example, both Bakker, Demerouti and Verbeke (2004) and Skaalvik and Skaalvik (2010) chose not to measure personal accomplishment in their studies of burnout in part due to concerns about its close overlap with self-efficacy. Skaalvik and Skaalvik (2007) found that self-efficacy was the only significant predictor of personal accomplishment in their study of teacher burnout.

As self-efficacy forms one of the constituents of core self-evaluations, it is not surprising that CSE was found to be a significant predictor. Alarcon and colleagues' meta-analysis (2009) found that each of the constituents of core self-evaluations were individual predictors of personal accomplishment, as well as the construct as a whole. Evidently, individuals with positive beliefs about their worth and abilities are more likely to perceive their work accomplishments more positively than those with negative beliefs about themselves. As discussed

previously, CSE can be viewed as a buffer against the negative events that can negatively influence perceptions of one's achievements and performance at work.

Two of the big five personality traits were identified as significant predictors of variance in personal accomplishment – extraversion and agreeableness. Agreeableness was not originally hypothesised to be a significant predictor of personal accomplishment, as evidence of such a link is mixed, with a number of studies failing to find a significant relationship (e.g. Kokkinos, 2007). However Cano-Garcia and colleagues' (2005) Spanish study identified agreeableness as an important predictor of personal accomplishment. It has been suggested that as high agreeableness reflects favourable perceptions of people in general, agreeable individuals are unlikely to experience negative responses from people in specific domains, such as the workplace. As noted previously, positive perceptions of interpersonal relationships can have an important protective influence against burnout.

Extraversion is often identified as having an important role in the burnout process, as introverted individuals are more passive and less likely to engage in social exchange and positive emotionality. These characteristics have been found to foster emotional exhaustion and depersonalisation, as well as diminish personal accomplishment (Cano-Garcia et al., 2005). Higher levels of extraversion are also related to sociability and positive interpersonal relationships and Kokkinos (2007) identified extraversion as a predictor of both emotional exhaustion and personal accomplishment in a sample of Greek Cypriot teachers.

### *Work Environment and Personal Accomplishment*

A number of potential relationships between work environment factors and personal accomplishment have been highlighted in the literature. In the current study, it was hypothesised that personal accomplishment would be particularly associated with classroom-level factors and teacher-student relationships rather than school-level factors. Participants with positive perceptions of these factors were expected to report higher personal accomplishment.

Bivariate analysis revealed that 7 work environment factors, both school and classroom level, were significantly correlated with personal accomplishment. When these variables were entered into a multiple regression analysis, it was found that two classroom-level variables, interactions (18.3%) and order and organization (3.5%) accounted for significant portions of the variance in personal accomplishment. None of the school-level variables were found to have reached significance, supporting the hypothesis that classroom factors have more of an influence of personal accomplishment than school-level factors.

Interactions in this case measures teacher-student interactions in the classroom. Results suggest that teachers with a positive view of their interactions with students are more likely to have elevated levels of personal accomplishment. This finding is in line with those of Dorman (2003) who found classroom interactions to be the strongest predictor of personal accomplishment in a sample of Australian teachers. Dorman suggests that classroom factors have an important bearing on personal accomplishment in comparison to school-level factors as teachers spend the majority of their time in class interacting with their students.

Classroom order and organization was also found to significantly predict personal accomplishment. This suggests that classroom climate has an important influence on this dimension of burnout, a finding that contradicts that of Byrne (1994) who found no direct link between classroom climate and personal accomplishment. Overall, findings suggest that personal accomplishment is significantly related to classroom factors rather than wider school factors.

### *Coping and Personal Accomplishment*

Based on a review of the literature, the following hypotheses on coping and personal accomplishment were formulated: personal accomplishment was expected to be positively predicted by problem-focused and active coping. Though not specifically hypothesised, it is expected that emotion-focused or avoidant coping strategies would negatively predict personal accomplishment.

Bivariate analysis showed that 9 coping strategies had significant correlations with personal accomplishment. Multiple regression analysis showed that these variables accounted for 27.7% of the variance in personal accomplishment, with active coping (5%) a significant positive predictor of personal accomplishment and denial (2.5%) a significant and negative predictor. The finding that active coping positively predicts personal accomplishment accords with Leiter's (1991) findings in a Canadian sample. The benefit of employing active coping strategies and maladaptive nature of denial or avoidant strategies in dealing with stress is evident.

### *Demographic Variables and Personal Accomplishment*

Based on the literature, no specific hypotheses in relation to demographic factors and personal accomplishment were made. Nevertheless, analyses were performed to assess for potential correlations and differences.

While there was no significant correlation between personal accomplishment and age or years of experience, significant differences based on sex, contractual status and school type were identified. Female participants were found to have significantly higher personal accomplishment scores than their male counterparts. Research findings in relation to sex differences in personal accomplishment have typically been quite mixed. A recent study carried out in Australia by McCormick and Barnett (2011) found that female teachers had significantly higher personal accomplishment than males, while a Canadian study (Fernet et al., 2012) failed to find any significant difference. Though the magnitude of the difference was relatively small, it is interesting that a significant result was found in an Irish sample. Further investigation is required to fully understand why this difference was found.

A significant difference in personal accomplishment was also identified between different school types. Specifically participants teaching in community/comprehensive schools had significantly higher personal accomplishment scores than those teaching in vocational schools. There are a number of differences between these school types which may help explain the finding. Traditionally vocational schools in Ireland focused on the teaching of manual trades, though modern vocational schools generally no longer have a



specific focus on teaching these areas and are very similar to all other types of second level school. Some differences do remain however; firstly vocational schools are administered by a different body to most community schools. The Irish report of the Teaching and Learning International Survey (TALIS; Shiel, Perkins & Gilleece, 2009) also revealed that vocational schools have lower teacher/student ratios and less pedagogical support personnel in their schools than secondary and community/comprehensive schools. These differences may account for the variation in personal accomplishment scores.

Finally, significant differences in personal accomplishment scores were found according to contractual status. Teachers on temporary contracts of less than 1 year reported significantly lower personal accomplishment than those on longer-term temporary contracts and those on permanent contracts. Based on the focus group study, it is possible that the 'extra pressure' on teachers with short-term contracts to justify their position and earn further employment may reduce their sense of accomplishment in their work. This group also had significantly higher levels of depersonalisation which may have influenced their evaluations of personal accomplishment.

### *Health and Personal Accomplishment*

Bivariate analysis found that just 3 of the 12 symptoms assessed had significant correlations with personal accomplishment. Small, negative correlations were found with upset stomach, trouble sleeping and eye strain. Thus it appears that

personal accomplishment is not very strongly linked to health. However, those with positive perceptions of their personal accomplishment are also somewhat less likely to report several physical symptoms commonly associated with stress.

### *Final Predictors of Personal Accomplishment*

The final analysis of predictors of personal accomplishment involved entering each of the significant predictors identified above into a standard multiple regression.

These factors as a whole accounted for 54.9% of the variance in personal accomplishment. Teacher self-efficacy, interactions, order and organisation, active coping and extraversion were each found to be significant predictors, explaining 6.7%, 5.5%, 1.8%, 1.4% and 1.4% of the variance respectively.

Thus, individual difference, work environment and coping factors each appear to influence personal accomplishment. This finding runs contrary to some previous studies which suggested that personal accomplishment was simply a similar construct to self-efficacy. Such studies have typically pointed to weak correlations with hypothesised antecedents and outcomes of burnout (e.g. Bakker, Demerouti & Verbeke, 2004; Skaalvik & Skaalvik, 2007). Findings of the current study suggest that personal accomplishment is in fact significantly related to emotional exhaustion and depersonalisation, as well as a number of work environment and personal factors hypothesised to predict burnout. As such personal accomplishment appears to fit with the other two burnout dimensions, rather than being an unrelated construct.

In terms of its predictors, as expected self-efficacy was a strong predictor of personal accomplishment, however the portion of shared variance was not overwhelming, suggesting that the two constructs are not simply two different measures of the same phenomenon. Findings suggest that those teachers with a positive view of their teaching capabilities are more likely to have a positive

perception of their accomplishments at work. Self-efficacy may also have influenced personal accomplishment in indirect ways.

Schwarzer and Hallum (2008) suggest that self-efficacious teachers are less likely to perceive the objective demands presented by their work as threatening than those individuals who doubt their professional capabilities. Thus, high self-efficacy teachers are less likely to perceive their environments as stressful and thus less likely to suffer from burnout. In the current study teacher self-efficacy was found to significantly and positively correlate with a number of environmental variables including interactions and order and organisation. These two factors were also found to significantly predict personal accomplishment. It is probable that perceptions of school and classroom environments partially mediate the relationship between self-efficacy and personal accomplishment, i.e. those teachers with positive efficacy beliefs are more likely to have positive perceptions of their work environments and in turn more positive appraisals of their personal accomplishment.

In general, research on the links between school and classroom variables and personal accomplishment have found mixed results. For example, Dorman (2003) found that classroom factors were particularly significant predictors of personal accomplishment, while Byrne (1994) found no significant path between classroom climate and personal accomplishment. It has been suggested that this difference may be partially down to the measurement tools used to assess environmental stressors, with Dorman claiming that Byrne's instrument was orientated more towards emotional exhaustion and depersonalisation. The current

study employed measures developed by Dorman which may have contributed to the finding that classroom factors were significant predictors of personal accomplishment. Overall, findings of the current study support the hypothesis that classroom-level variables are more important predictors of personal accomplishment than school-level variables. Those teachers with a positive view of the order and relationships within their classrooms are more likely to report high levels of personal accomplishment.

Of the remaining predictors, extraversion and active coping accounted for a similar amount of the variance in personal accomplishment. Extraversion has previously been found to relate to personal accomplishment in teachers (Kokkinos, 2007) and the meta-analysis of Alarcon et al. (2009) suggested that the relationship between extraversion and personal accomplishment was particularly strong. Extraverts generally tend to be cheerful, enthusiastic and sociable which may positively influence their perceptions of their relationships with colleagues and students. In addition, extraversion has been found to predict the use problem-focused strategies such as rational action (McCrae & Costa, 1986; Watson & Hubbard, 1996). Indeed active coping was also found to significantly and positively predict personal accomplishment in its own right.

Evidently a range of factors are important in predicting individual levels of personal accomplishment in teachers. Self-efficacy appears to play a particularly influential role, in accordance with previous findings. However, a number of other factors were also found to explain unique portions of the variance in personal accomplishment, suggesting that it is not simply another measure of self-efficacy.

Differences based on teacher sex, contractual status and school type are noteworthy and may require more detailed exploration to explain how they came about.

### **16.3 Conclusions and Implications**

In accordance with the literature, the current investigation has found that personal, demographic, environmental and coping variables each contribute significant portions of the variance in the three dimensions of burnout. In addition, each of the three burnout dimensions are predicted by different configurations of these variables, which demonstrates the complex nature of burnout. While the predictor variables accounted for up to 54.9% of the variance in burnout dimensions, due to the cross-sectional nature of the current study the specific directions in which predictors influence each other may only be inferred based on existing theories of burnout development. Nevertheless, the current study has yielded important insights into burnout in Irish secondary teachers which will help inform future studies in the area. Furthermore, this study provides valuable guidance for the creation of effective interventions and the development of a clear predictive model of burnout development in this population.

Stress and burnout, as described by the transactional model, results from a 'transaction' between a person and their environment whereby the demands placed on the individual exceed their perceived coping resources (Lazarus & Folkman, 1984). This theoretical model has guided the interpretation of the results of the current study and it is particularly relevant in relation to the emotional exhaustion dimension. Emotional exhaustion has been described as the central quality of burnout, reflecting the stress that results from work overload.

In the current study emotional exhaustion was most strongly predicted by neuroticism followed by collaboration with colleagues and student relations.

Neuroticism reflects a general tendency towards negative emotions such as anxiety, depression, hostility and frustration (Costa & McCrae, 1992). Highly neurotic individuals may be predisposed to view their environment and coping capabilities in a negative light, potentially contributing to the development of stress and burnout. Negative perceptions of both colleagues and students were found to significantly contribute to emotional exhaustion, suggesting that relationships constitute the most important environmental stressors in relation to emotional exhaustion. In terms of interventions to tackle emotional exhaustion, combined personal and organisational approaches have been found to be the most effective (Awa et al., 2010). Cognitive-behavioural training may help tackle negative appraisals, while programmes designed to improve relationships within schools could reduce the impact of environmental demands. Unfortunately, very few intervention studies have been carried out with teachers, meaning there is a lack of solid research upon which to build an effective intervention strategy.

Depersonalisation has been described as a reaction to emotional exhaustion, in that the experience of exhaustion prompts individuals to take action to emotionally and cognitively distance themselves from their work (Maslach et al., 2001). Depersonalisation was found to be most strongly predicted by behavioural disengagement coping, core self-evaluations and classroom order and organisation. In addition, depersonalisation was significantly higher in males and in those on temporary contracts of less than 1 year. The pattern of predictors is not surprising given the nature of depersonalisation, which in itself is a type of behavioural disengagement. Those with low evaluations of their efficacy and abilities to cope



are more likely to experience depersonalisation, which in the case of teachers may manifest itself in negative attitudes towards students or their work in general. Perceptions of classroom order and organisation and depersonalisation may in fact feed into each other in a reciprocal manner, though it is not possible to establish given the cross-sectional nature of the current research. Skaalvik and Skaalvik (2010) noted the need for longitudinal research to properly investigate reciprocal relationships between burnout dimensions and related constructs.

The concern expressed by younger focus group participants in relation to the additional pressure they experienced was borne out by the survey results. Less experienced participants, particularly those on temporary short-term contracts were significantly more likely to experience depersonalisation. Given the relatively young age-profile of Irish second level teachers (OECD, 2012) and current restrictions on schools wishing to employ teachers, it is likely that there are a considerable number of teachers who fall into the risk categories. In addition, male teachers were found to be significantly more likely to experience depersonalisation than females, a finding expected based on the literature (e.g. Maslach et al., 2001). Overall, depersonalisation was found to be related to demographic, personality, coping and environmental factors, suggesting that its development is complex. Based on the findings of the current study, increased support and guidance for those with inadequate coping resources and skills should underpin interventions against depersonalisation.

Finally, despite doubts regarding its place within burnout, personal accomplishment was significantly correlated with the other two burnout

dimensions, and was also predicted by a comparable combination of factors to emotional exhaustion and depersonalisation. These findings effectively contradict arguments made by some researchers against the inclusion of a personal accomplishment dimension in burnout (e.g. Skaalvik & Skaalvik, 2010). Teacher self-efficacy was found to be the strongest predictor, in line with previous research (e.g. Skaalvik & Skaalvik, 2007), while classroom interactions and order and organisation were also significant predictors. Extraversion and active coping were found to significantly and positively predict personal accomplishment.

It has been suggested that personal accomplishment may develop either alongside emotional exhaustion and depersonalisation (Leiter, 1993), or sequentially due to a gradual erosion of one's sense of effectiveness caused by the other two burnout dimensions (Maslach et al., 2001). In addition, personal accomplishment is generally considered to arise from a lack of relevant resources rather than excessive demands. Findings of the current study partially support this assertion in that self-efficacy, which may be viewed as a personal coping resource, was a significant predictor.

Extraversion and active coping were also identified as significant predictors of personal accomplishment. Previous studies have identified a positive relationship between extraversion and the use of problem-focused coping strategies such as active coping (Watson & Hubbard, 1996). Thus it is possible that individuals high in extraversion employ more adaptive strategies in dealing with stress and maintain more positive perceptions of their achievements at work. Finally, environmental factors were also found to predict personal accomplishment – participants with a

positive view of classroom climate were more likely to have higher levels of personal accomplishment.

Differences in personal accomplishment were found depending on sex, contractual status and the type of school participants taught in. Males and those on temporary short-term contracts were found to have significantly lower personal accomplishment than females and those with longer-term and permanent contracts. This sex difference was unexpected based on the literature review and in conjunction with higher depersonalisation among males suggests that further work is required in order to understand why Irish male second level teachers appear more prone to burnout than females. Job security again appeared to be important, with those in short-term employment significantly less likely to perceive high levels of personal accomplishment. Interestingly, those participants teaching in vocational schools reported lower personal accomplishment than those in community or secondary schools. Though the magnitude of the difference was small, it is an interesting finding that may relate to the different administrative body, funding situations or teacher/student ratios in vocational schools. Again, further study is required to explore this finding in more detail.

Findings suggest that interventions designed to increase personal accomplishment should focus on improving teacher self-efficacy, particularly in relation to classroom management. Efficacy beliefs play an important role in determining how environmental challenges are perceived and affect an individual's reaction to these challenges (Bandura, 2006). Efficacious teachers enhance student achievement and motivation, pursue their goals and cope well with demands

placed on them (Schwarzer & Hallum, 2008). In contrast, low self-efficacy teachers are more likely to report lower job satisfaction, higher levels of stress, depression, anxiety and helplessness (Betoret, 2006). In accordance with social cognitive theory, support from, and successful interactions with, principals, students, colleagues and parents; and opportunity for observation of successful colleagues build self-efficacy for teaching (Tschannen-Moran, Woolfolk Hoy & Hoy, 2001). Focusing on improving these relationships and interactions may provide a useful avenue for future interventions aimed at personal accomplishment.

As well as looking at the predictors of burnout, the current study also assessed potential health implications of burnout. Maslach and colleagues (2001) suggested that emotional exhaustion was more predictive of stress-related health outcomes than the other two dimensions and the findings of this study support that view. While all three dimensions had significant associations with physical symptoms, emotional exhaustion was associated with all but one of the 12 symptoms assessed. Correlations with tiredness/fatigue and trouble sleeping were particularly noteworthy. Issues in relation to sleep have been found to be strongly related to occupational stress, and there is evidence to suggest that insomnia has a reciprocal relationship with stress (Armon et al., 2008).

The findings of this study have a number of important implications. Firstly, it is clear that burnout is predicted by a complicated transaction of demographic, personal, environmental and coping factors, and efforts to develop interventions must take this complexity into account. Secondly, burnout has significant links to a number of health problems that go beyond the confines of the workplace. The

finding in both the qualitative and quantitative studies that those (generally younger and less experienced) individuals who find themselves in part-time employment are more likely to experience aspects of burnout than those with greater job security is of great interest. In light of Ireland's current economic difficulties and cutbacks in educational funding, many teachers are likely to experience uncertainty in their employment due to the reduced availability of permanent teaching positions. Addressing this problem will not be easy, however if a large number of teachers remain in precarious employment a further problem of widespread burnout and associated health issues could develop amongst this group.

The employment of both qualitative and quantitative research methods provided a very comprehensive picture of the stress and burnout picture within the population of interest. The two studies carried out were mutually enriching in a number of ways. Firstly, the focus groups taken alone provide a very useful picture of the factors perceived as stressful by a group of Irish second level teachers in their daily working life. This information was useful and interesting in its own right but also helped inform the selection of survey instruments that were as reflective as possible of the issues needing to be assessed. Without this information it would have been necessary to rely on scales that may not have been relevant in the Irish context.

A further demonstration of the value of the mixed-methods approach was the 'colour' and context added to the quantitative findings by the utterances of the focus group participants. For example, the survey finding that those participants on

short-term contracts of less than one year reported significantly higher levels of depersonalisation and lower personal accomplishment than those on longer-term contracts was reflective of testimony from the focus groups. A number of focus group participants who held short-term contracts described the additional pressure they experienced in attempting to establish themselves and gain permanent employment. Such teachers appear to experience significantly less optimal working conditions in terms of their job security and wages. Gathering the actual words and experiences of teachers in this situation adds support and context to the findings of the statistical analysis of the survey results.

Thus it must be concluded that one of the key contributions of this investigation was its breadth both in terms of the types of data gathered and the number of variables assessed. There appears to be a developing trend towards the inclusion of both qualitative and quantitative methods in psychological research and the current investigation forms a valuable component in this movement. The use of a mixed-methods approach was highly satisfactory and it is the author's belief that studies that adopt this approach can potentially provide comprehensive and nuanced understanding of a wide range of psychological phenomena of interest.

## 16.4 Limitations

Though the mixed-methods approach employed in the current investigation was satisfactory in a number of ways, aspects of the study had their limitations.

A number of issues arise in relation to the sample employed in the survey, particularly in relation to size and representation. In order to use multiple regression appropriately it is recommended by Tabachnik and Fidell (2007) that  $50 + 8n$  (where 'n' = number of predictor variables used) participants be included to acquire a predictive model. It is further recommended that  $104 + n$  participants are included to allow sufficient power to assess the unique contribution of each predictor. As there were over 30 predictors it was necessary to alter the analysis slightly. This involved the use of separate analyses for each category of predictor. While this was not ideal it did help reduce the issue of multicollinearity which can damage multiple regression analyses.

Despite the use of a range of recruitment strategies, the sample size was not as large as anticipated. A further issue related to the high drop-out rate of individuals who started the survey but failed to complete it (31.4% non-completion). The survey included a large number of items and required approximately 15 minutes to complete which may explain the large number of participants who failed to finish it. It is also possible that such a lengthy and in-depth survey would be particularly unappealing to individuals experiencing exhaustion and other issues related to burnout.

As the sampling strategy relied entirely on volunteers the sample used cannot be considered to be representative of the overall population of secondary teachers in Ireland. It was virtually impossible to obtain a representative sample of teachers without the cooperation of the Teaching Council who were unwilling to assist in contacting teachers due to data protection issues. Furthermore, as all data were self-reported it is important to note that issues of exaggeration, socially desirable responding, etc. could hamper the validity of the information gathered. The development of objective measures of environmental and other factors remains a challenge.

A further limitation in relation to the survey instruments was revealed by the poor psychometric properties of some of the scales. In particular, the coping and classroom environment scales. In relation to the classroom questionnaire, there appears to be a lack of a robust instrument for measuring this environment with many studies employing bespoke instruments. As noted in the previous paragraph, it is evident that better instruments are required in order to adequately assess the classroom environment. Efforts were made in order to improve the properties of the classroom and coping instruments using principal components analysis, however the scales remained below desired thresholds in terms of their reliability coefficients.

Another issue noted relates to the focus group phase of study. It is possible that due to the sensitive nature of the topic that some participants may have been reluctant to discuss particularly negative experiences amongst fellow professionals. In addition, due to time constraints only 3 focus groups were run, with 20



participants all recruited from a relatively small geographical area. It is possible that the issues identified by this sample were not representative of those experienced by the population as a whole. It is also possible that some factors may have been missed as they were not discussed by the sample. Given greater time it would have been possible to run a larger number of focus groups which may have identified other important factors to consider.

Perhaps the major limitation of the study was its cross-sectional nature. While this is an extremely common approach in the social sciences (Neumann, 2007), it has some significant flaws. In particular, the inability to establish causation hampers the value of results, as interpretation based on theory is instead employed in order to make inferences about directionality. As discussed previously a number of variables may in fact have had reciprocal rather than unidirectional relationships and it was not possible to adequately explore this using the current methods.

## 16.5 Potential Future Research

In the course of the current investigation, a number of potential avenues of further research have emerged. These possible future directions are outlined below.

The first and possibly most important opportunity relates to the direction and nature of the relationships between burnout, its predictors and consequences. As discussed previously, due to the cross-sectional nature of the current research, establishing causation is not possible. While theory and previous research provide some grounding upon which to base causal inferences, this still involves making a number of assumptions which may not be valid. Carefully constructed longitudinal research would help address this problem, and numerous burnout researchers have called for more longitudinal studies to explore directionality (e.g. Byrne, 1994; Skaalvik & Skaalvik, 2010). Several such studies have in fact explored teacher burnout and provided useful insights into aspects of burnout development, in particular the relationship between self-efficacy and burnout (e.g. Brouwers & Tomic, 2000; Schwarzer & Hallum, 2008). Nevertheless, there remains a paucity of comprehensive explorations of the transactions and interactions involved in predicting both burnout and its consequences.

A further potential avenue of research revolves around the finding that those teachers on short-term temporary contracts are significantly more likely to experience aspects of burnout than those with longer-term or permanent employment. This issue could be particularly important given the current financial situation faced by Irish schools, where offering teachers permanent positions is no longer feasible in some circumstances. Job security is rarely explored in studies of

burnout in teachers, despite evidence to suggest that feelings of insecurity in relation to employment are related to a range of negative outcomes, including detrimental effects on attitudes to work, organisational commitment and health (Sverke, Hellgren & Naswall, 2002). The quantitative and qualitative evidence provided by the current study suggests that individual teachers, particularly those new to the profession, experience elevated levels of pressure, anxiety and stress in their efforts to gain and retain employment. A study that specifically examined the experiences of this group and the challenges they face could help identify solutions at individual, school and policy level to tackle the problems associated with job insecurity.

A third important area of potential study could focus on the experiences of those teachers who have actually experienced burnout. Such a study could both explore the individual experience of burnout as well as paths to recovery. In addition, this type of study could assist in the development of clinical guidelines for diagnosis and treatment of burnout, an issue that has been raised on a number of occasions in the literature (e.g. Korczak, Huber & Kister, 2010). This would allow for the accurate estimation of the scale of burnout in Irish teachers, something that may only be guessed at currently. The vast majority of studies of burnout focus on its predictors, with a smaller number examining its impact on individuals and organisations. However, there are very few studies that specifically examine the experiences of those who have experienced burnout and its negative effects. A mixed-methods approach would be ideal for such an undertaking, with a qualitative phase exploring the reality of burnout for those affected. This process could also

help identify potential amendments to be made to instruments such as the Maslach Burnout Inventory in order to ensure that burnout is identified as efficiently and accurately as possible.

A fourth potential avenue for further research revolves around another issue that hampers work environment research, namely the lack of objective measures of environmental factors. The use of self-report measure provides useful information on employee perceptions of their work environments, however such perceptions don't always reflect objective reality. Self-report measures are also subject to time of measurement effects and other problems that can hamper their validity and reliability. It has been suggested that combination of self-report and other measures constitutes a more accurate method of assessing work environments (Bakker, van Veldhoven & Demerouti, 2010). The development of such measures in the school environment could thus prove useful. For example, measuring the time spent in the classroom on teaching, disciplinary issues and other matters should provide useful information to supplement self-reports.

Finally, as discussed previously in the Conclusions and Implications section, the findings of the current study provide a useful basis to guide an intervention study designed to tackle burnout in teachers. Findings of the current study suggest that interventions should be targeted both at the individual and organisational levels in order to address both the personal and environmental contributors to burnout. Awa et al. (2010) suggest that such mixed approaches tend to be more effective than interventions targeted solely at the individual or organisation.

## 16.6 Summary:

A review of the available literature suggested that a number of demographic, personal, environmental, coping and health factors would be significantly associated with the three dimensions of burnout in teachers. The findings of qualitative and quantitative studies largely supported previous findings, however a number of unexpected results were also found. Varying combinations of factors predicted each of the burnout dimensions, reflecting the fact that each one is relatively distinct in nature. In the case of emotional exhaustion, the personality trait of neuroticism was the strongest predictor, while depersonalisation and personal accomplishment were most strongly predicted by the behavioural disengagement coping strategy and self-efficacy respectively. In each case, at least one environmental variable was found to significantly predict variance, with classroom climate and relationships with student and colleagues each appearing to play an important role. As expected, many significant bivariate correlations between burnout, particularly the emotional exhaustion component, and physical symptoms were identified.

A number of somewhat unexpected findings also emerged. First of all, while sex differences in depersonalisation have previously been found, it is noteworthy that males had significantly lower personal accomplishment scores as well as significantly higher levels of depersonalisation. Another particularly notable finding relates to differences in depersonalisation and personal accomplishment among teachers with short-term, temporary contracts of employment. Results from the survey support the views articulated by focus group participants in this contractual

situation who described the extra pressure experienced due to the precarious nature of their employment.

While the mixed-methods approach employed in the current investigation was satisfactory, a number of limitations of the study were also identified. Firstly, the sample size was not ideal in terms of its size or representativeness. A larger and more representative sample would improve the ability to generalise conclusions. The cross-sectional nature of the study must also be taken into consideration when evaluating findings, as it was not possible to adequately explore the directionality of relationships between variables.

Despite the issues highlighted above, the findings provide useful qualitative and quantitative data on the experience and development of stress and burnout among Irish teachers, a population previously unexplored in the burnout literature. Valuable information was gathered that could help form the basis of future interventions to tackle and prevent teacher burnout. An intervention study would form just one of a number of potential avenues for future research stemming from the current investigation.

There is a clear need for more longitudinal research to comprehensively explore the nature and direction of relationships between ‘predictor’ variables and burnout dimensions. While established theories provide a useful basis for making inferences, there is growing understanding that reciprocal relationships between variables play an important role in burnout development. In addition, research specifically focused on those who could be considered ‘burned out’ could provide useful insights into the experience of the syndrome as well as potential paths to

recovery. Finally, current findings suggest that studies focused on sex differences in burnout and the role of contractual status may be of value.

In summary, findings are largely in line with those expected based on the literature; however a number of novel findings also emerged. The combination of qualitative and quantitative methods provided rich and detailed data on the day to day experiences, frustrations and opportunities faced by Irish teachers, as well as comprehensive statistical information on factors related to each dimension of burnout. While a number of limitations of the investigation emerged, suggestions for potential future research to address these issues have been advanced.

## 17. Conclusion

No such study has previously been carried out with an Irish sample. Thus it provides useful information on a previously unstudied population, as well as adding to the global literature on teacher burnout.

The key findings of the study are:

- Emotional exhaustion is predicted by a combination of factors. In the final analysis neuroticism was found to positively predict emotional exhaustion, while collaboration with colleagues and teacher-student relations were negative predictors. It is significantly correlated with a large number of physical symptoms.
- Depersonalisation is positively predicted by behavioural disengagement, and negatively predicted by core self-evaluations and classroom order and organisation. Less experienced teachers, those with short-term contracts and males each have significantly higher levels of depersonalisation than their peers.
- Personal accomplishment is positively predicted by teacher self-efficacy, extraversion, classroom interactions, order and organisation and active coping strategies. Males, those with short-term contracts and teachers in vocational schools each have lower levels of personal accomplishment than their peers.



These findings may help inform future intervention studies which could effectively tackle the problem of burnout in Irish second level teachers. The breadth and mixed-methods nature of this investigation provided a comprehensive and nuanced picture of stress and burnout among Irish second-level teachers.

## References

- Alarcon, G., Eschleman, K.J., & Bowling, N.A. (2009). Relationships between personality variables and burnout: A meta-analysis. *Work and Stress*, 23, 244 – 263.
- Aldwin, C. M., Sutton, K. J., & Lachman, M. (1996). The development of coping resources in adulthood. *Journal of personality*, 64(4), 837 – 871.
- American Psychiatric Association (2000) *Diagnostic and statistical manual of mental disorders* (4<sup>th</sup> ed. - Text Revision). Washington DC: Author.
- Anderson V.L., Levinson E.M., Barker W., Kiewra K.R. (1999). The effects of meditation on teacher perceived occupational stress, state and trait anxiety, and burnout. *School Psychology Quarterly*, 14(1), 3 – 25.
- Armon, G., Shirom, A. and Melamed, S. (2012). The big five Personality factors as predictors of changes across time in burnout and its facets. *Journal of Personality*, 80, 403 – 427.

Armon, G., Shirom, A., Shapira, I., & Melamed, S. (2008). On the nature of burnout–insomnia relationships: A prospective study of employed adults. *Journal of Psychosomatic Research*, 65(1), 5 – 12.

Arnold, J., Randall, R., Patterson, F., Silvester, J., Robertson, I., Cooper, C., ... Den Hartog, D. (2010). *Work psychology: Understanding human behaviour in the workplace* (5<sup>th</sup> ed.). Harlow: Pearson.

Awa, W.L., Plaumann, M., & Walter, U. (2010). Burnout prevention: A review of intervention programs, *Patient Education and Counselling*, 78, 184 – 190.

Bakker, A.B. & Demerouti, E. (2007). The job demands resources model: state-of-the-art. *Journal of Managerial Psychology*, 22, 309 – 328.

Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. *Human Resource Management*, 43, 83 – 104.

Bandura, A. (1997). *Self-efficacy: the exercise of control*. New York: Freeman.

Bandura, A. (2006). Adolescent development from an agentic perspective. In F. Pajares, & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (pp. 1 – 43). Greenwich, Connecticut: Information Age Publishing.

Beasley, M., Thompson, T., & Davidson, J. (2003). Resilience in response to life stress: the effects of coping style and cognitive hardiness. *Personality and Individual differences*, 34(1), 77 – 95.

Berry, W. D. (1993). *Understanding regression assumptions*. Sage university paper series on quantitative applications in social sciences (pp. 7 – 92). Newbury Park, CA: Sage

Best, R.G., Stapleton, L.M. & Downey, R.G. (2005) Core self-evaluations and job burnout: The test of alternative models, *Journal of Occupational Health Psychology*, 10, 441 – 451.

Bertoch, M.R., Nielsen, E.C., Curley, J.R. & Borg, W.R. (1988). Reducing teacher stress. *The Journal of Experimental Education*, 75(1), 117 – 128.

Betoret, F. D. (2006). Stressors, self-efficacy, coping resources, and burnout among secondary school teachers in Spain. *Educational Psychology, 26*(4), 519 – 539.

Betoret, F.D. (2009). Self-efficacy, school resources, job stressors and burnout among Spanish primary and secondary school teachers: A structural equation approach. *Educational Psychology, 29*, 45 — 68.

Bipp, T. (2010). What do people want from their jobs? The Big Five, core self-evaluations and work motivation. *International Journal of Selection and Assessment, 18*, 28 – 39.

Blase, J. J. (1986). A qualitative analysis of sources of teacher stress: Consequences for performance. *American Educational Research Journal, 23*, 13 – 40.

Blase, J.J. (1982). A social-psychological grounded theory of teacher stress and burnout. *Educational Administration Quarterly, 18*, 93 – 113.

Bono, J. E., & Judge, T. A. (2003). Core self-evaluations: A review of the trait and its role in job satisfaction and job performance. *European Journal of Personality, 17*, 5 – 18.

Boyatzis, R.E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Sage.

Boyd, N. G., Lewin, J. E., & Sager, J. K. (2009). A model of stress and coping and their influence on individual and organizational outcomes. *Journal of Vocational Behavior, 75*(2), 197 – 211.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology, 3*(2), 77 – 101.

Brewer, E. W., & Shapard, L. (2004). Employee burnout: A meta-analysis of the relationship between age or years of experience. *Human Resource Development Review, 3*(2), 102 – 123.

- Brouwers, A. & Tomic, W. (2000). A longitudinal study of teacher burnout and perceived self-efficacy in classroom management, *Teaching and Teacher Education*, 16, 239 – 253.
- Brunborg, G.S. (2008). Core-self evaluations. A predictor variable for job stress. *European Psychologist*, 13, 96 – 102.
- Bryman, A. (2006). Integrating quantitative and qualitative research: how is it done?. *Qualitative research*, 6(1), 97 – 113.
- Byrne, B.M. (1994). Burnout; testing for validity, replication and invariance of causal structure across elementary, intermediate and secondary teachers, *American Educational Research Journal*, 31, 1 – 15.
- Cano-Garcia, F. J., Padilla-Munoz, E. M., & Carrasco-Ortiz, M. A. (2005). Personality and contextual variables in teacher burnout, *Personality and Individual Differences*, 38, 929 – 940.
- Carney, R. M., Freedland, K. E., & Jaffe, A. S. (1990). Insomnia and depression prior to myocardial infarction. *Psychosomatic medicine*, 52(6), 603 – 609.

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: a theoretically based approach. *Journal of personality and social psychology*, 56(2), 267 – 283.

Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the Brief COPE. *International Journal of Behavioral Medicine*, 4, 92 – 100.

Cervone, D. (1997). Social-cognitive mechanisms and personality coherence: Self-knowledge, situational beliefs, and cross-situational coherence in perceived self-efficacy. *Psychological Science*, 8, 43 – 50.

Chamorro-Premuzic, T., Ahmetoglu, G., & Furnham, A. (2008). Little more than personality: Dispositional determinants of test anxiety (the Big Five, core self-evaluations, and self-assessed intelligence). *Learning and Individual Differences*, 18, 258 – 263.

Charmaz, K. (2006). *Constructing Grounded Theory: A Practical Guide through Qualitative Analysis*. London: SAGE Publications.



Cohen, J. (1988) *Statistical power analysis for the behavioral sciences* (2nd ed.).

Hillsdale, NJ: Erlbaum.

Conway, P. F.; Murphy, R; Rath, A; Hall, K. (2009) *Learning to Teach and its*

*Implications for the Continuum of Teacher Education: A Nine Country Cross-*

*national Study*. Teaching Council, Maynooth.

Cooper, C., Katona, C., & Livingston, G. (2008). Validity and reliability of the brief

COPE in carers of people with dementia: The LASER-AD study. *The Journal of*

*nervous and mental disease*, 196(11), 838 – 843.

Costa, P.T., & McCrae, R.R. (1992). *NEO PI-R. Professional manual*. Odessa, FL:

Psychological Assessment Resources, Inc.

Cox, T. (1993). *Stress research and stress management: Putting theory to work*.

Sudbury: HSE Books.

De Jong, D.M., & Emmelkamp, P.M.G. (2000). Implementing a stress management

training: comparative trainer effectiveness. *Journal of Occupational Health*

*Psychology*, 5(2), 309 – 320.

Demerouti, E. (1999). *Burnout: A consequence of specific working conditions among human service and production tasks*. Frankfurt/Main: Lang.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86, 499 – 512.

Dienstbier, R. A. (1989). Arousal and physiological toughness: implications for mental and physical health. *Psychological review*, 96(1), 84 – 100.

Dorman, J. (2003). Relationship between school and classroom environment and teacher burnout: A LISREL analysis. *Social Psychology of Education*, 6, 107 – 127.

Dorman, J. (1999). The evolution, validation and use of a personal form of the Catholic School Classroom Environment Questionnaire. *Catholic Education*, 3, 141 – 157.

Dorman, J.P., Fraser, B.J., & McRobbie, C.J. (1997). Relationship between school-level and classroom-level environment in secondary schools. *Journal of Educational Administration*, 35, 74 – 91.

Erez, A., & Judge, T. A. (2001). Relationship of core self-evaluations to goal setting, motivation, and performance. *Journal of Applied Psychology*, 86, 1270 – 1279.

Etzion, D. (1984). Moderating effect of social support on the stress–burnout relationship. *Journal of Applied Psychology*, 69(4), 615 – 622.

EU Directorate General for Health and Consumer Affairs. (2011). *European Community Health Indicators*. [Fact sheet] Retrieved from:  
[http://ec.europa.eu/health/indicators/docs/echi\\_factsheet.pdf](http://ec.europa.eu/health/indicators/docs/echi_factsheet.pdf)

Evason, E., & Whittington, D. (1997). Patients' perceptions of quality in a Northern Ireland hospital trust: a focus group study. *International Journal of Health Care Quality Assurance*, 10(1), 7 – 19.

- Farber, B. A., & Miller, J. (1981). Teacher burnout: A psycho-educational perspective. *Teachers College Record*, 83(2), 235 – 243.
- Fernet, C., Guay, F., Senécal, C., Austin, F. (2012). Predicting intraindividual changes in teacher burnout: The role of perceived school environment and motivational factors. *Teaching and Teacher Education*, 28, 514 – 525.
- Ferris, D. L., Johnson, R. E., Rosen, C. C., & Tan, J. A. (2012). Core Self-Evaluations A Review and Evaluation of the Literature. *Journal of Management*, 38(1), 81 – 128.
- Field, A. (2005). *Discovering statistics with SPSS* (2<sup>nd</sup> ed.). London: Sage.
- Fife-Schaw, C. (2000). Surveys and sampling issues. In Breakwell, G. M., Hammond, S., & Fife-Schaw, C. (Eds.), *Research methods in psychology* (2<sup>nd</sup> ed.) (pp. 88 – 104). London: Sage Publications Ltd.
- Fitzgerald, B. (2008). Teachers and workplace stress, *Astir*, 26, 17 – 18.

Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: study of emotion and coping during three stages of a college examination. *Journal of personality and social psychology*, 48(1), 150 – 170.

Folkman, S. & Lazarus, R. S., (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior*, 21, 219 –2 39.

Folkman, S., Lazarus, R. S., Pimley, S., & Novacek, J. (1987). Age differences in stress and coping processes. *Psychology and aging*, 2(2), 171 – 184.

Forlin, C. (2001). Inclusion: identifying potential stressors for regular class teachers. *Educational Research*, 43(3), 235 – 245.

Frankenhaeuser, M. (1991). The psychophysiology of workload, stress, and health: Comparison between the sexes. *Annals of Behavioral Medicine*, 13, 197 – 204.

Fraser, B.J. (1998). Classroom environment instruments: Development, validity, and applications. *Learning Environments Research*, 1, 7 – 33.

Fraser, B. J., & Rentoul, A. J. (1982). Relationships between school-level and classroom-level environment. *Alberta Journal of Educational Research*, 28, 212 – 225.

Freudenberger, H.J., (1974). Staff burnout, *Journal of Social Issues*, 30, 159 – 165.

Friedman, I.A. (1991). High- and low-burnout schools: Schools culture aspects of teacher burnout. *Journal of Educational Research*, 84, 325 – 333.

Friedman, M., & Rosenman, R. H. (1959). Association of Specific Overt Behavior Pattern With Blood and Cardiovascular Findings Blood Cholesterol Level, Blood Clotting Time, Incidence of Arcus Senilis, and Clinical Coronary Artery Disease. *Journal of the American Medical Association*, 169(12), 1286 – 1296.

Frone, M. R. (2003). Work–family balance. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of occupational health psychology* (pp. 143–162). Washington, DC: American Psychological Association.

Gardner, D. G., & Pierce, J. L. (2010). The Core Self-Evaluation Scale: Further construct validation evidence. *Educational and Psychological Measurement*, 70, 291 – 304.

Gellatly, I. R. (1996). Conscientiousness and task performance: Test of cognitive process model. *Journal of Applied Psychology*, 81(5), 474 – 482.

Gillespie, N. A., Walsh, M. H. W. A., Winefield, A. H., Dua, J., & Stough, C. (2001). Occupational stress in universities: staff perceptions of the causes, consequences and moderators of stress. *Work & stress*, 15(1), 53 – 72.

Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological assessment*, 4(1), 26 – 42.

Goodwin, R. D., & Friedman, H. S. (2006). Health status and the five-factor personality traits in a nationally representative sample. *Journal of Health Psychology*, 11(5), 643 – 654.

Gosling, S. D., Rentfrow, P. J., & Swann Jr, W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in personality*, 37(6), 504 – 528.

Grant, S. & Langan-Fox, J. (2007) Personality and the Occupational Stressor-Strain Relationship: The Role of the Big Five. *Journal of Occupational Health Psychology*, 12, 20 – 33.

Grayson, J.L., Alvarez, H.K. (2008) School climate factors relating to teacher burnout: A mediator model. *Teaching and Teacher Education*, 24, 1349 – 1363.

Greenglass, E., Fiksenbaum, L., & Burke, R. J. (1996). Components of social support, buffering effects and burnout: Implications for psychological functioning. *Anxiety, Stress, and Coping*, 9(3), 185 – 197.

Guglielmi, R. S., & Tatrow, K. (1998). Occupational stress, burnout, and health in teachers: A methodological and theoretical analysis. *Review of educational research*, 68(1), 61 – 99.



- Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology, 43*, 495 – 513.
- Halbesleben, J.R.B. & Buckley, M.R. (2004). Burnout in organizational life. *Journal of Management, 30*, 859 – 879.
- Halbesleben, J.R.B., & Demerouti, E. (2005). The construct validity of an alternative measure of burnout: Investigating the English translation of the Oldenburg Burnout Inventory. *Work & Stress, 19*, 208 – 220.
- Harris, K. J., Harvey, P., & Kacmar, K. M. (2009). Do social stressors impact everyone equally? An examination of the moderating impact of core self-evaluations. *Journal of Business and Psychology, 24*, 153 – 164.
- Häusser, J.A., Mojzisch, A., Niesel, M. & Schulz-Hardt, S. (2010). Ten years on: A review of recent research on the Job Demand-Control (-Support) model and psychological well-being, *Work & Stress, 24*, 1 – 35.
- Higgins, J. E., & Endler, N. S. (1995). Coping, life stress, and psychological and somatic distress. *European Journal of Personality, 9*, 253 – 270.

- Ho, D. (2006). The focus group interview: Rising to the challenge in qualitative research methodology. *Australian Review of Applied Linguistics*, 29(1), 1 – 19.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44, 513 – 524.
- Hockey, G.R.J. (1993), Cognitive-energetical control mechanisms in the management of work demands and psychological health, in Baddely, A. & Weiskrantz, L. (Eds.), *Attention: Selection, Awareness, and Control* (pp. 328 – 345), Oxford: Clarendon Press.
- Hogan, R., Hogan, J., & Roberts, B. W. (1996). Personality measurement and employment decisions: Questions and answers. *American Psychologist*, 51, 469 – 477.
- Holt, D.T., & Jung, H.H. (2008). Development of a Korean version of a core self-evaluations scale. *Psychological Reports*, 103, 415 – 425.

Huberman, M. (1989). The professional life cycle of teachers. *Teachers College Record, 91*, 51 – 57.

Hudek-Knežević, J., Krapić N., Kardum, I. (2006). Burnout in dispositional context: The role of personality traits, social support and coping styles. *Review of Psychology, 13*, 65 – 73.

Hwang, C., Scherer, R. F., & Ainina, M. F. (2003) Utilizing the Maslach Burnout Inventory in cross-cultural research. *International Journal of Management, 20*, 3 – 10.

Ito, J. K., & Brotheridge, C. M. (2003). Resources, coping strategies, and emotional exhaustion: A conservation of resources perspective. *Journal of Vocational Behavior, 63*, 490 – 509.

Jackson, S. E., & Maslach, C. (1982). After-effects of job-related stress: Families as victims. *Journal of Organizational Behavior, 3*(1), 63 – 77.

Jex, S. M., & Beehr, T. A. (1991). Emerging theoretical and methodological issues in the study of work-related stress. In G.R. Ferris & K.W. Rowland (Eds).

*Research in personnel and human resources management* (pp. 311–365).

Greenwich, CT: JAI Press.

John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The Big Five Inventory-Versions*

*4a and 54*. Berkeley, CA: University of California, Berkeley, Institute of

Personality and Social Research.

John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History,

measurement, and theoretical perspectives. In L. A. Pervin & O. P. John

(Eds.), *Handbook of personality theory and research* (pp. 102–138). New

York: Guilford Press.

Johnson, S., Cooper, C., Cartwright, S., Donald, I., Taylor, P.J. & Millet, C. (2005)

The experience of work-related stress across applications, *Journal of*

*Management*, 20, 178 – 187.

Johnson, R. E., Rosen, C. C., & Levy, P. E. (2008). Getting to the core of core self-

evaluations: A review and recommendations. *Journal of Organizational*

*Behavior*, 29, 391 – 413.

Johnson, B., Stevens, J. J., & Zvoch, K. (2007). Teachers' Perceptions of School Climate A Validity Study of Scores From the Revised School Level Environment Questionnaire. *Educational and psychological measurement*, 67(5), 833 – 844.

Johnson, B., & Stevens, J. J. (2001). Exploratory and confirmatory factor analysis of the School Level Environment Questionnaire (SLEQ). *Learning Environments Research*, 4, 325 – 344.

Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C.J. (2003). The Core Self-Evaluations Scale (CSES): Development of a measure. *Personnel Psychology*, 56, 303 – 331.

Judge, T. A., Erez, A., & Bono, J. E. (1998). The power of being positive: The relationship between positive self-concept and job performance. *Human Performance*, 11, 167 – 187.

Judge, T. A., Martocchio, J. J., & Thoresen, C. J. (1997). Five-factor model of personality and employee absence. *Journal of Applied Psychology*, 82, 745 – 755.

Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: A Meta-analysis. *Journal of Applied Psychology, 87*, 530 – 541.

Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C. J. (2002). Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common core construct? *Journal of Personality and Social Psychology, 83*, 693 – 710.

Judge, T. A., Heller, D., & Klinger, R. (2008). The dispositional sources of job satisfaction: A comparative test. *Applied Psychology: An International Review, 57*, 261 – 272.

Judge, T. A., & Bono, J. E. (2001). A rose by any other name...Are self-esteem, generalized self-efficacy, neuroticism, and locus of control indicators of a common construct? In B. W. Roberts & R. Hogan (Eds.), *Personality psychology in the workplace* (pp. 93 -118). Washington, DC: American Psychological Association.

Judge, T. A., & Ilies, R. (2002). Relationship of personality and to performance motivation: A meta-analysis. *Journal of Applied Psychology, 87*, 797 – 807.

Kammeyer-Mueller, J.D., Judge, T. A., & Scott, B. A. (2009). The role of core self-evaluations in the coping process: Testing an integrative model. *Journal of Applied Psychology, 94*, 177 – 195.

Kaplan, H. B. (1996). Psychosocial stress from the perspective of self theory. In H. B. Kaplan (Ed.), *Psychosocial stress: Perspective on structure, theory, life-course, and methods* (pp. 175–244). San Diego, CA: Academic Press.

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

Kaschka W.P., Korczak D., Broich K. (2011). Burnout - a fashionable diagnosis. *Deutsches Arzteblatt International, 108*(46), 781 – 787.

Kerr, R. A., Breen, J., Delaney, M., Kelly, C., and Miller, K. (2011). A qualitative study of workplace stress and coping in secondary teachers in Ireland, *Irish Journal of Applied Social Studies, 11*, 27 – 38.

- Kieschke, U., & Schaarschmidt, U. (2008). Professional commitment and health among teachers in Germany: A typological approach. *Learning and Instruction, 18*, 429 – 437.
- Kitzinger, J. (1995). Qualitative research. Introducing focus groups. *British medical journal, 311*(7000), 299 – 302.
- Klassen, R. M., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher sex, years of experience, and job stress. *Journal of Educational Psychology, 102*(3), 741 – 756.
- Kokkinos, C.M. (2007). Job stressors, personality and burnout in primary school teachers, *British Journal of Educational Psychology, 77*, 229 – 243.
- Kokkinos, C. M. (2006). Factor structure and psychometric properties of the Maslach Burnout Inventory-Educators Survey among elementary and secondary school teachers in Cyprus. *Stress and Health, 22*(1), 25 – 33.



Kooij, D., de Lange, A., Jansen, P., & Dikkers, J. (2008). Older workers' motivation to continue to work: Five meanings of age. *Journal of Managerial Psychology*, 23, 364 – 394.

Kop, N., Euwema, M., & Schaufeli, W. (1999). Burnout, job stress and violent behaviour among Dutch police officers. *Work & Stress*, 13(4), 326 – 340.

Korczak D., Kister C., Huber B. (2010) *Differentialdiagnostik des Burnout-Syndroms*, DIMDI, Köln.

[http://portal.dimdi.de/de/hta/hta\\_berichte/hta278\\_bericht\\_de.pdf](http://portal.dimdi.de/de/hta/hta_berichte/hta278_bericht_de.pdf)

Kraus, S. J. (1995). Attitudes and the prediction of behavior: A meta-analysis of the empirical literature. *Personality and social psychology bulletin*, 21(1), 58 – 75.

Kristensen, T. S., Borritz, M., Villadsen, E., & Christensen, K. B. (2005). The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. *Work & Stress*, 19, 192 – 207.

Krueger, R.A., & Casey, M.A. (2009). *Focus groups: A practical guide for applied research* (4th Ed.). Thousand Oaks, CA: Sage Publications.

Kyriacou, C. (2001). Teacher stress: Directions for future research. *Educational review*, 53(1), 27 – 35.

Lazarus, R. S., & Folkman, S. (1984). *Psychological Stress and the Coping Process*. New York, NY: Springer.

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.

Leiter, M.P. (1991). Coping patterns as predictors of burnout: The function of control and escapist coping patterns. *Journal of Organizational Behaviour*, 12, 123 – 144.

Leiter, M.P (1993). Burnout as a developmental process: Consideration of models.

In W. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 237–250). Washington, DC: Taylor & Francis.

Leiter, M. P., & Schaufeli, W. B. (1996). Consistency of the burnout construct across occupations. *Anxiety, Stress, and Coping*, 9(3), 229 – 243.

Luszczynska, A., Scholz, U., & Schwarzer, R. (2005). The general self-efficacy scale: Multicultural validation studies. *The Journal of Psychology*, 139(5), 439 – 457.

Mahootian, F., & Eastman, T. E. (2009). Complementary frameworks of scientific inquiry: Hypothetico-deductive, hypothetico-inductive, and observational-inductive. *World Futures*, 65(1), 61 – 75.

Maslach, C. & Jackson, S.E. (1981). The measurement of experienced burnout. *Journal of Occupational Behaviour*, 2, 99 – 113.

Maslach, C., Jackson, S.E., & Leiter, M. (1996). *The Maslach burnout inventory* (3<sup>rd</sup> ed.). Palo Alto, Consulting Psychologists Press.

Maslach C. (1976). Burned-out. *Human Behavior*, 5, 16 – 22.

Maslach, C., Schaufeli, W.B. and Leiter, M.P. (2001), Job burnout. *Annual Review of Psychology*, 52, 397 – 422.

Maslach, C., Leiter, M.P, Jackson, S.A. (2012). Making a significant difference with burnout interventions: Researcher and practitioner collaboration. *Journal of Organizational Behavior, J. Organiz. Behav.* 33, 296 – 300.

Matud, M. P. (2004). Sex differences in stress and coping styles. *Personality and individual differences*, 37(7), 1401 – 1415.

McCormick, J., & Barnett, K. (2011). Teachers' attributions for stress and their relationships with burnout. *International Journal of Educational Management*, 25(3), 278 – 293.

McCrae, R. R., & Costa, P. T. (1986). Personality, coping, and coping effectiveness in an adult sample. *Journal of personality*, 54(2), 385 – 404.

McFarlin, S. K., & Fals-Stewart, W. (2002). Workplace absenteeism and alcohol use: A sequential analysis. *Psychology of Addictive Behaviors*, 16, 17 – 21.

Mearns, J., & Cain, J. E. (2003). Relationships between teachers' occupational stress and their burnout and distress: Roles of coping and negative mood regulation expectancies. *Anxiety, Stress & Coping*, 16(1), 71 – 82.

Mental Health Commission. (2011). *The Human Cost: An Overview of the Evidence on Economic Adversity and Mental Health and Recommendations for Action*.

Retrieved [http://www.mhcirl.ie/News\\_Events/HCPaper.pdf](http://www.mhcirl.ie/News_Events/HCPaper.pdf)

Milfont, T., Denny, S., Ameratunga, S., Robinson, E., & Merry, S. (2008). Burnout and wellbeing: Testing the Copenhagen Burnout Inventory in New Zealand teachers. *Social Indicators Research*, 89(1), 169 – 177.

Miller, S. M., & Kirsch, N. (1987). Sex differences in cognitive coping with stress. In *Sex and stress*. (pp. 278-307), New York, NY: Free Press.

- Millward, L. (1995). Focus Groups, in G.M. Breakwell, S. Hammond, S. and C. Fife-Schaw (eds), *Research Methods in Psychology* (pp. 304-324). London: Sage.
- Montgomery, C., & Rupp, A. A. (2005). A meta-analysis for exploring the diverse causes and effects of stress in teachers. *Canadian Journal of Education/Revue canadienne de l'éducation*, 458 – 486.
- Morgan, K., McGee, H., Dicker, P., Brugha, R., Ward, M., Shelley, E., ... & Watson, D. (2009). *SLAN 2007: Survey of Lifestyle, Attitudes and Nutrition in Ireland. Alcohol use in Ireland: A profile of drinking patterns and alcohol-related harm from SLAN 2007*. Retrieved from: <http://epubs.rcsi.ie/psycholrep/30/>
- Mount, M. K., Barrick, M. R., & Stewart, G. L. (1998). Personality predictors of performance in jobs involving interaction with others. Invited submission to a special "personality" issue of *Human Performance*, 11, 145 – 166.
- Newton, T. (1989). Coping with occupational stress among professional engineers, in *Stress and Tension Control, Volume 3: Stress Management* eds. F.J. McGuigan, W. E. Sime, & J. Macdonald Wallace, (pp. 155-163). New York: Plenum.

Nixon, A. E., Mazzola, J. J., Bauer, J., Krueger, J. R., & Spector, P. E. (2011). Can work make you sick? A meta-analysis of the relationships between job stressors and physical symptoms. *Work & Stress*, 25(1), 1 – 22.

O'Brien, T. B., & DeLongis, A. (1996). The Interactional Context of Problem-, Emotion-, and Relationship-Focused Coping: The Role of the Big Five Personality Factors. *Journal of personality*, 64(4), 775 – 813.

OECD (2012), *Education at a Glance 2012: OECD Indicators*, OECD Publishing.

Otero-López, J. M. , Santiago, M. J., Godás, A., Castro, C., Villardefrancos, E., & Ponte, D. (2008). An integrative approach to burnout in secondary school teachers: Examining the role of student disruptive behaviour and disciplinary issues. *International journal of psychology and psychological therapy*, 8(2), 259 – 270.

Pallant, J. (2007). *SPSS Survival Manual* (3<sup>rd</sup> ed.). New York, McGraw-Hill.

Patton, M.Q. (1990). *Qualitative evaluation and research methods* (2<sup>nd</sup> ed.). Thousand Oaks, CA: Sage.

Penley, J. A., & Tomaka, J. (2002). Associations among the Big Five, emotional responses, and coping with acute stress. *Personality and individual differences*, 32(7), 1215 – 1228.

Pines, A., & Aronson, E. (1988). *Career Burnout, Causes and Cures*, New York: Free Press.

Pithers, R. T. (1995). Teacher stress research: Problems and progress. *British Journal of Educational Psychology*, 65, 387–392.

Potter, J. and Wetherell, M. (1987) *Discourse and social psychology: beyond attitudes and behaviour*. London: Sage.

Robson, C. (2002). *Real world research: A resource for social scientists and practitioner researchers* (2<sup>nd</sup> ed.). Oxford: Blackwell.

Roulston, K. (2001). Data analysis and ‘theorizing as ideology’. *Qualitative Research*, 1(3), 279 – 302.



Schaufeli, W.B., & Buunk, B.P. (2003). Burnout: An overview of 25 years of researching and theorising. In: Schabracq, M. J., Winnubst, J. A. M., Cooper, C. L., (eds.), *Handbook of Work and Health Psychology*. (pp. 383 - 425.) Chichester: Wiley.

Schaufeli, W.B., Daamen, J. & Van Mierlo, H. (1994). Burnout among Dutch teachers: An BMI validity study. *Educational and Psychological Measurement*, 53(3), 803 – 812.

Schaufeli, W.B., Enzmann, D. (1998) *The Burnout Companion to Study and Practice: A Critical Analysis*. Taylor & Francis, London.

Schaufeli, W.B. & Taris, T.W. (2005). The conceptualization and measurement of burnout: Common ground and worlds apart. *Work & Stress*, 19(3), 256 – 262.

Schaufeli, W.B., Leiter, M.P., Maslach, C. (2009). Burnout: 35 years of research and practice. *Career Development International*, 14(3), 204 – 220.

Schaufeli, W. B., & Salanova, M. (2007). Efficacy or inefficacy, that's the question: Burnout and work engagement, and their relationships with efficacy beliefs. *Anxiety, Stress, and Coping*, 20(2), 177 – 196.

Schnall, P.L., Landsbergis, P.A., Baker, D, (1994). Job Strain and Cardiovascular Disease, *Annual Review of Public Health*, 15, 381 – 411.

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

Schutte, N., Toppinen, S., Kalimo, R., & Schaufeli, W. (2000). The factorial validity of the Maslach Burnout Inventory-General Survey (MBI-GS) across occupational groups and nations. *Journal of Occupational and Organizational psychology*, 73(1), 53 – 66.

Schwarzer, R., Schmitz, G.S., & Daytner, G.T. (1999). *The Teacher Self-Efficacy scale* [On-line publication]. Available at: [http://www.fu-berlin.de/gesund/skalen/t\\_se.htm](http://www.fu-berlin.de/gesund/skalen/t_se.htm)

- Schwarzer, R., Schüz, B., Ziegelmann, J. P., Lippke, S., Luszczynska, A., & Scholz, U. (2007). Adoption and maintenance of four health behaviors: Theory-guided longitudinal studies on dental flossing, seat belt use, dietary behavior, and physical activity. *Annals of Behavioral Medicine*, 33, 156 – 166.
- Schwarzer, R., & Hallum, S. (2008). Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediation analyses. *Applied Psychology*, 57(1), 152 – 171.
- Schwarzer, R., & Greenglass, E. (1999). Teacher burnout from a social-cognitive perspective: A theoretical position paper. In R. Vandenberghe & M. Huberman (Eds.), *Understanding and preventing teacher burnout: A sourcebook of international research and practice* (pp. 238–246). Cambridge: Cambridge University Press.
- Shaha, M., Wenzel, J., & Hill, E. E. (2011). Planning and conducting focus group research with nurses. *Nurse researcher*, 18(2), 77 – 87.
- Shiel, G., Perkins, R., & Gilleece, L. (2009). *TALIS summary report for Ireland*. Dublin: Educational Research Centre.

Shirom, A. (2005). Reflections on the study of burnout. *Work & Stress*, 19(3), 263 – 270.

Shirom, A. (1989). Burnout in work organizations, in Cooper, C.L. & Robertson, I. (Eds.), *International review of industrial and organizational psychology*, (pp. 25 – 48). New York, Wiley.

Shirom, A., Oliver, A., & Stein, E. (2009). Teachers' stressors and strains: A longitudinal study of their relationships. *International Journal of Stress Management*, 16(4), 312 – 332.

Skaalvik, E. M., & Skaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective teacher efficacy, and teacher burnout. *Journal of Educational Psychology*, 99, 611 – 625.

Skaalvik, E.M. & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education*, 26, 1059 – 1069.

Sloan, G. (1999). Good characteristics of a clinical supervisor: a community mental health nurse perspective. *Journal of Advanced Nursing*, 30(3), 713 – 722.

Smith, T. W. (2006). Personality as risk and resilience in physical health. *Current directions in psychological science*, 15(5), 227 – 231.

Spector, P.E. (1998). A control model of the job stress process. In C.L. Copper (Ed.), *Theories of Organizational Stress* (pp. 153\_169). London: Oxford University Press.

Spector, P. E., & Jex, S. M. (1998). Development of four self-report measures of job stressors and strain: Interpersonal Conflict at Work Scale, Organizational Constraints Scale, Quantitative Workload Inventory, and Physical Symptoms Inventory. *Journal of occupational health psychology*, 3(4), 356 – 367.

Stoeber, J., & Rennert, D. (2008). Perfectionism in school teachers: relations with stress appraisals, coping styles, and burnout. *Anxiety, Stress, & Coping. An International Journal*, 21, 37 – 53.

Stumpp, T., Hulsheger, U. T., Muck, P. M., & Maier, G. W. (2009). Expanding the link between core self-evaluations and affective job attitudes. *European Journal of Work and Organizational Psychology*, 18, 142 – 166.

Suler, J. (2004). The online disinhibition effect. *Cyberpsychology & behavior*, 7(3), 321 – 326.

Sverke, M., Hellgreen, J., & Naswall, K. (2002) No security: a meta-analysis and review of job insecurity and its consequences. *Journal of Occupational Health Psychology*, 7, 242 – 264.

Tabachnick, B.G. and Fidell, L.S. (2007). *Using Multivariate Statistics* (5th ed.). New York: Allyn and Bacon.

Tang, C. S. K., Au, W. T., Schwarzer, R., & Schmitz, G. (2001). Mental health outcomes of job stress among Chinese teachers: Role of stress resource factors and burnout. *Journal of Organizational Behavior*, 22(8), 887 – 901.

Taylor, S.E. (1999). What is stress? In S.E. Taylor (Ed.), *Health psychology* (pp. 168 - 201). New York: McGraw-Hill.

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

- Tsaousis, I., Nikolaou, I., Serdaris, N., & Judge, T. A. (2007). Do the core self-evaluations moderate the relationship between subjective well-being and physical and psychological health?. *Personality and Individual Differences*, 42(8), 1441 – 1452.
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: capturing an elusive construct. *Teaching and Teacher Education*, 17, 783 – 805.
- Tsouloupas, C. N., Carson, R. L., Matthews, R., Grawitch, M. J., & Barber, L. K. (2010). Exploring the association between teachers' perceived student misbehaviour and emotional exhaustion: the importance of teacher efficacy beliefs and emotion regulation. *Educational Psychology*, 30(2), 173 – 189.
- Van der Klink, J.J.L. & van Dijk, F.J.H. (2003). Dutch practice guidelines for managing adjustment disorders in occupational and primary health care. *Scandinavian Journal of Work Environment and Health*, 29, 478 – 487.
- Vaughn, S., Schumm, J. S., & Sinagub, J. M. (1996). *Focus group interviews in education and psychology*. London: Sage.

- Visser, M. R. M., Smets, E. M. A., & de Haes, J. C. J. M. (2003). On stress and satisfaction among medical consultants: Precursors and consequences for health and burnout. *Canadian Medical Association Journal*, 168, 271 – 275.
- Watson, D., Clark, L. A., & Harkness, A. R. (1994). Structures of personality and their relevance to psychopathology. *Journal of Abnormal Psychology*, 108, 18 – 31.
- Watson, D., & Hubbard, B. (1996). Adaptational style and dispositional structure: Coping in the context of the Five-Factor model. *Journal of personality*, 64(4), 737 – 774.
- Weiss, H.M. (1996). Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences and job beliefs on job satisfaction and variations in affective experiences over time. *Research in Organizational Behavior*, 18, 1 – 84.
- Wolpin, J., Burke, R. J., & Greenglass, E. R. (1991). Is job satisfaction an antecedent or a consequence of psychology burnout? *Human Relations*, 44(2), 193 – 209.



World Health Organisation (1992). *The ICD-10 classification of mental and behavioral disorders*. Geneva: WHO.

Wynne, R., Clarkin, N., Dolphin, C. (1991). *Stress and Teachers, Council of Teachers' Unions Survey on Teacher Stress*. Dublin: Work Research Centre Ltd.

Xanthopoulou, D., Bakker, A. B., Dollard, M. F., Demerouti, E., Schaufeli, W. B., Taris, T. W., & Schreurs, P. J. G. (2007). When do job demands particularly predict burnout? The moderating role of job resources. *Journal of Managerial Psychology*, 22, 766 – 786.

## Appendix 1 – Focus group interview schedule

- **School Level:** Outside of the classroom, what are your feelings about the atmosphere in school? e.g. dealing with colleagues/principal and the atmosphere amongst staff.
  - How do you feel about the resources (i.e. teaching materials, computers, etc.) within the school? Are they adequate to achieve what you want? Do you have to compete for resources?
  - How do you feel about your colleagues? Are they supportive, interested in you and your work, cold? Staffroom politics?
  - What are the positive aspects within the school? Sense of belonging and worth?
- **Classroom Level:** What aspects of the classroom environment do you find challenging, if any?
  - Discipline, student ability and motivation, class size, control over what/how you teach, exam preparation, student background?
  - What are the positive aspects? e.g. support from students, feelings of reward from student achievements.
- **External:** Are there elements outside the immediate school environment that can leave you feeling frustrated? e.g. changes in pay and conditions, dealing with parents, public perception of the profession, etc.
  - How do you feel about recent changes in conditions for teachers?
  - How do you feel about your job now, have your feelings about it changed?
  - What are your feelings on your dealings with parents?
  - Public perception of teachers/portrayal in the media
- **Overall:** Do you think teaching is a stressful job on balance?
  - What aspects are the most stressful?
  - What are the positive/rewarding aspects of your job?
  - Any final comments you would like to add?

## Appendix 2 – Survey recruitment poster

