The Ability to Bounce Back:

The Relationship Between Resilience, Coping, and Positive Outcomes.

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ABSTRACT

Resilience is a term of increasing prevalence in many aspects of society including the workplace. This thesis has sought to examine the relationship resilience has with coping, engagement, and life satisfaction. Data was collected via a survey that included standard measures for the variables of interest and two open-ended questions targeting sources of stress and sources of satisfaction. Findings show a positive relationship between resilience and task-focused coping, engagement, and life satisfaction. No relationship was found between resilience and maladaptive coping or social support. Additionally, it was found that resilience acted as a full mediator in the relationship between task-focused coping and engagement, but had no mediating effect in the relationship between task-focused coping and life satisfaction. The open-ended questions identified that the same demand frequently acted as both a source of stress and a source of satisfaction.

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CHAPTER ONE: INTRODUCTION

Stress, wellbeing, and coping are important concepts for both industry and the community. This thesis will seek to examine the relationship between resilience and factors such as coping style, engagement, and life satisfaction. It will begin with a review of the changes in psychological thought that lead to the development of the paradigm, positive psychology, and an interest in positive constructs such as resilience, engagement, and life satisfaction. Models for investigating the relationship between wellbeing, coping, and resilience are explored to establish an appropriate foundation and methodology which was used to collect data in a New Zealand sample. The results of this sample are presented and discussed in relation to the theoretical foundations.

Positive Psychology

> Throughout history philosophers considered happiness to be the highest good and ultimate motivation for human action. Yet for decades psychologists largely ignored positive subjective wellbeing, although human unhappiness was explored in depth (Diener, 1984, p. 542).

Psychology at its origin had three main aims: “curing mental illness, making the lives of all people more productive and fulfilling, and identifying and nurturing high talent” (Seligman & Csikszentmihalyi, 2000, p. 5). In the years immediately following World War II, changes in economic conditions substantially influenced the direction psychology was taking (Seligman & Csikszentmihalyi, 2000). At the expense of the other two original aims (making the lives of all people more productive and fulfilling and identifying and nurturing high talent), psychology became primarily focused around curing mental illness. During this time considerable effort was put into measuring and diagnosing mental illness and suffering, as this was the area in which researchers could obtain funding and practitioners could make a living (Luthans & Youssef, 2007; Reivich & Shattẻ, 2002; Seligman & Csikszentmihalyi, 2000).

The focus on negative outcomes observed in psychology as a discipline can also be seen in research specifically on stress and wellbeing (McGowan, Gardner, & Fletcher, 2006). Stress is not a recent concept and can be traced back to the beginning of human kind. Feelings of exhaustion after intense effort, extreme temperatures, or intense fear are examples of stress that would have been part of everyday life for prehistoric humans. The origins of stress as a construct can be found in the realm of physical science. Within physical science, stress was understood as a "force which acting on a body produces strain or deformation" (Cofer & Appley, 1964, p. 441). As a psychological concept stress was initially associated with hardship and adversity (Lazarus, 1993; Lazarus & Folkman, 1984).

More recently, stress has become a popular word in modern dialogue as people describe their feelings of pressure, anxiety, and tension. Stress has consistently been linked with poor health such as the premature development of degenerative diseases, heart attacks, strokes, cancer, and depression (Edwards & Cooper, 1988; Nelson & Simmons, 2003). Work stress and the associated issues cost organisations billions of dollars each year in lost productivity, absenteeism, turnover, and compensation, to name a few (DeFrank & Ivanchevich, 1998; Jones & Bright, 2001; Simmons & Nelson, 2001). Interestingly, many people identify work as the biggest stressor in their life, and yet conversely also indicate they gain enjoyment and satisfaction from their work (Simmons & Nelson, 2001).

The popularity of stress as a construct can be traced back to the period surrounding the Second World War. During World War II, psychology was very much focused around measuring and diagnosing mental illness (Lazarus & Folkman, 1984; Seligman & Csikszentmihalyi, 2000). Stress was understood in physiological terms that focused on bodily responses to a demand for example, changes in nervous functioning (Lazarus & Eriksen, 1952; Lazarus & Folkman, 1984). Extensive research led to the conclusion bodily responses to demands had evolved to allow humans and animals alike to deal with an immediate threat i.e. fight or flight (Kemeny, 2003; McEwen, 1998). Changes in nervous functioning allowed the organism to create an optimum state for response by mobilising systems in need and suppressing those not needed (Kemeny, 2003). For example, “when responding to a threat the body increases concentrations of glucose (an energy source) to ready the organism for physical activity, at the same time the body inhibits processes that promote growth and reproduction” (Kemeny, 2003, p. 85). While there are said to be no adverse consequences associated with mobilisation and suppression, persistent or frequent activation of this process can have long-term negative effects on health (Kemeny, 2003; McEwen, 1998).

While the physiological understanding of stress has it merits, questions asked by the military after World War II challenged this model of understanding stress and called for a more complex explanation. During the war there was much interest in soldiers' responses to combat and in particular, the emotional breakdown, referred to as 'battle fatigue' or 'war neurosis' (Lazarus, 1993). Following World War II, many observed the demands of everyday life, such as work, relationships, and illness could cause responses similar to those observed in combat soldiers (Kemeny, 2003; McEwen, 1998). At this time the military also wanted to know how to identify stress resistant soldiers and further train them to manage their stress effectively (Lazarus, 1993). While investigating these issues and questions it became clear the stress process was more complex than first thought and researchers set out to develop new insights in the area. Initially these subsequent definitions of stress were influenced by the behaviourist epistemology of American psychology and focused either on the stimuli that resulted in stress, or the response (Lazarus, 1993). More recently there has been a move towards defining stress in terms of the processes involved (Jones & Bright, 2001; Lazarus, 1993). Definitions and models of stress will be further examined in Chapter 2.

During the process of redefining concepts such as stress and wellbeing it became clear psychology as a discipline needed to refocus and reinstate all of its original missions (Seligman & Csikszentmihalyi, 2000). Psychology is "not just the study of pathology, weakness and damage: it is also the study of strength and virtue" (Seligman & Csikszentmihalyi, 2000, p. 7). The end of the 20th Century saw the appropriate conditions for this refocus as the Cold War was coming to an end and economic prosperity was being restored (Luthans & Youssef, 2007; Reivich & Shattẻ, 2002). Named the positive psychology movement, this new focus sought to examine good health and wellbeing, and to understand how psychology could make good healthy people better (Reivich & Shattẻ, 2002). These aims can be explored under two main goals:

1. "To increase understanding of human strengths through the development of classification systems and methods to measure those strengths" and;
2. "To infuse this knowledge into effective programs and interventions designed to build participant's strengths rather than remediate their weakness" (Reivich & Shattẻ, 2002, p. 58).

Positive psychology focuses on taking people from neutral to wellbeing, whereas the focus of traditional psychology was on taking people from the point of suffering to neutral. The shift towards a positive focus can be seen in many fields of psychology including the study of stress and wellbeing in the workplace. A greater emphasis is now placed on the positive outcomes associated with wellbeing, and stress is increasingly argued to be a part of life that cannot be avoided (McGowan, Gardner, & Fletcher, 2006). Recognition is also being given to the positive and beneficial outcomes of effective stress management and wellbeing (McGowan et al. 2006; Selye, 1973).

Hans Selye was one of the first authors to suggest stress is “not inherently maladaptive” and may have some benefits (McGowan et al. 2006, p. 92). Other influential authors have subsequently supported this idea and indicated a moderate level of stress or pressure can be advantageous (Dumont & Provost, 1999; Karasek, 1979; Lazarus & Folkman, 1984; Nelson & Simmons, 2003). Eustress is the term for the constructive and healthy outcomes stress can facilitate, for example accomplishment, satisfaction, and pride after winning a race or completing a complex and demanding task (Dumont & Provost, 1999; Selye, 1974; Waller, 2001). This is in contrast to distress which encompasses the negative dysfunctional outcomes of extreme pressure and stress (Selye, 1974; Simmons & Nelson, 2001).

Edwards and Cooper (1988) conducted a comprehensive review of eustress and distress concluding they are distinctive constructs rather than opposite ends of a continuum and can be defined as the following:

- Eustress: “a positive psychological response to a stressor, as indicated by the presence of positive psychological states;”
- Distress: “a negative psychological response to a stressor, as indicated by the presence of negative psychological states” (Nelson & Simmons, 2003, p. 104).

The paradigm of positive psychology has been applied to the workplace within the field of Positive Organizational Behaviour (POB) (Luthans & Youssef, 2007). POB is defined as “the study and application of positively orientated human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplaces" (Luthans, 2002b, p. 59). It is consistent with the trend for evidence based practice seen in other areas such as organisational science and medicine (Luthans & Youssef, 2007; Schaufeli & Salanova, 2007).

POB recognises the need to understand and examine positively orientated constructs (Luthans & Youssef, 2007). This change in thinking occurred at a time when organisations were striving to find innovative sources of competitive advantage. In a contracting global market employers were looking for effective methods of encouraging above average performance from employees. POB has the potential to increase productivity through enhancing wellbeing and fostering unique sources of competitive advantage in both the product and employment market (Luthans & Youssef, 2007).

The rise of positive psychology has changed the way both illness and health are understood. This change in thinking has created an interest in positive constructs such as resilience and raised questions around how these positive constructs interact with other constructs, both positive and negative. This thesis will attempt to address some of these issues by examining in detail the positive construct of resilience, its application to the workplace, and how it relates to other constructs such as life satisfaction, coping, and engagement.

Thesis Structure

This introductory chapter has laid the foundations for the concepts of interest by examining a brief history of psychology including the development of stress and wellbeing as concepts. The rise of the positive psychology movement provides an explanation of the motivations and drivers behind a renewed interest in positive constructs such as resilience. In addressing these issues, this thesis is divided into eight chapters, the purpose and contents of each chapter is outlined within this introductory chapter.

Chapter two provides an overview of models of stress and wellbeing. Three models are examined to provide support for the use of the transactional model in this study. The chapter then proceeds to outline the components of the transactional model including primary appraisal, secondary appraisal, coping, and the influence of individual differences.

Chapter three offers an overview of the positive and negative outcomes of work demands. This includes an overview of stress and burnout and the subsequent interest in engagement and life satisfaction.

Chapter four provides a detailed examination of resilience. This includes an overview of the history of resilience and the development in our understanding of the resilience concept. Psychological capital is reviewed as the positive psychology view of resilience in the workplace. The chapter goes on to outline in turn the characteristics of resilient people, how resilience differs from other constructs, developing resilience, and resilience at work.

Chapter five presents the methodology for this thesis and provides justification for the use of a mixed methods approach. The measures, scale development, and data analysis are also outlined in this chapter.

The results of this thesis are presented in chapter six and include correlation analysis, tests of mediation and moderation, and thematic analysis.

Chapter seven presents the discussion of this thesis and reviews the convergence of past and previous research in the form of literature and the findings of this thesis. During this process a number of theoretical and practical insights arose for discussion.

Finally, chapter eight represents the conclusion of this thesis and outlines the implications and limitations to emerge from the findings, in doing so suggestions for further research are offered.

CHAPTER TWO: MODELS OF STESS AND WELLBEING

Changing world wide conditions post World War II prompted the need for development and refinement in the focus of psychology in general and in particular the study of stress and wellbeing. This development has subsequently prompted the need for advancement in the models used to describe and understand workplace stress and wellbeing. Some of the most prominent models of workplace stress are General Adaptation Syndrome (GAS), the Person-Environment (P-E) Fit model, the work Demands-Control-Support (DCS) model, and the transactional model. This chapter will begin by outlining one of the initial models of stress, GAS, and then move to examine three more complex models to show support for the use of the transactional model in this study.

General Adaptation Syndrome

Developed by Hans Selye, GAS was one of the initial models of stress with a focus on the physiological reaction of a body experiencing stress (Selye, 1973). Selye was a Canadian endocrinologist-physiologist and leading writer on stress in his time. He recognised that the body had a pattern of responses when faced with a potentially threatening stimulus (Selye, 1973). Regardless of the nature of the demand or threat, the physiological response of the body was the same (Lazarus & Folkman, 1984; Selye, 1973). “Stress was in effect not an environmental demand, but a universal physiological set of reactions and processes created by such a demand" (Lazarus & Folkman, 1984, p. 2). Selye identified three stages in the process that became known as GAS:

1. The initial alarm reaction stage begins with a period of decreased resistance, immediately countered by a period of increasing resistance in which defensive mechanisms begin to operate;
2. The second stage of resistance marks optimal adaptation;
3. The final stage of exhaustion is marked by a decrease in resistance and adaptation as exhaustion sets in (Cofer & Appley, 1964; Selye, 1974).

Within the GAS model a demand that would initiate the process is defined as a stressor (Selye, 1974). In other words, a stressor is identified as something that evokes the stress process. The circular nature of this definition has lead to much criticism of the model as it fails to explain the situations and conditions that would see a demand result in stress. This criticism pointed to the need for a more complex model (Jones & Bright, 2001; Lazarus & Folkman, 1984; Selye, 1973). Further emphasising the need for a more developed model Selye himself had observed in some situations a demand could have a positive outcome. As the model does not allow for positive outcomes or account for the influence of coping, it is not suitable for use in this study.

The Person-Environment Fit Model

The P-E Fit model is a more complex model of stress that allows for positive outcomes and one frequently used in organisational behaviour research. In recent times it has become established as a framework in organisational stress research (Edwards, 1996; Edwards & Cooper, 1990; French, Caplan, & Harrison, 1982). P-E Fit is based on the hypothesis that stress is not purely caused by characteristics of the person or the characteristics of environment, but the interaction between the person and the environment also influences the outcome (Edwards, 1996; Kreiner, 2006). The model suggests stress is the outcome of a mismatch between a person's needs and abilities and the demand and supply characteristics of the environment, see Figure 1 for a diagrammatic representation (Edwards, 1996; Edwards & Cooper, 1990).

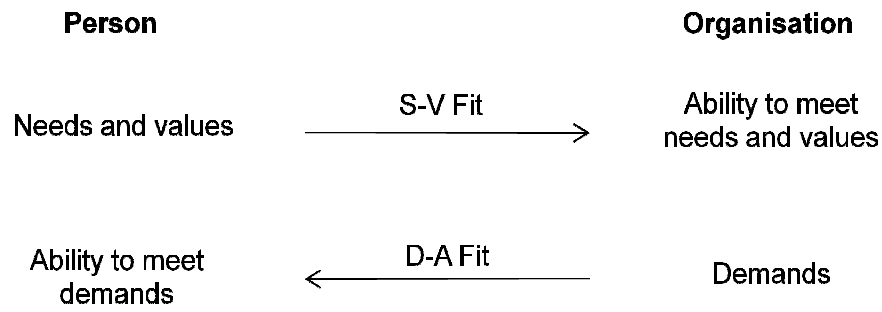

Figure 1. Types of Fit in the P-E Fit Model of Stress.

The model emphasises the need for two types of fit in particular to enable wellbeing, as seen in Figure 1(French et al. 1982; Kreiner, 2006). Firstly, fit is needed between a person's needs and values, and the organisations ability to meet these needs, Kreiner (2006) identifies this as Supplies-Values (S-V) Fit.

The needs and values of a person in this context refer to “consciously held desires” (Edwards, 1996, p. 294) which represent the goals, interests, and motivators of the individual (Edwards & Cooper, 1990; French et al. 1982). S-V fit is based on individual interpretation in the form of cognitive comparison between “the perceived and desired amount, frequency, or quality of conditions or events experienced” (Edwards, 1996, p. 294).

Secondly, there must also be fit between the demands of the organisation and the ability of the person to meet the demands (Demands-Abilities (D-A) Fit) see Figure 1(Edwards, 1996). A lack of fit between the person and the environment reflects a mismatch of expectations between the individual and the organisation and can result in stress (Edwards, 1996; Kreiner, 2006). The concept of ‘fit’ and particularly D-A Fit, implies the presence of resources such as effective coping skills, resilience, and engagement with one’s job (Edwards & Cooper, 1990). The presence of these resources and the skills they allow could facilitate an employee meeting the demands and expectations of the organisation (Edwards & Cooper, 1990). Consequently, lack of fit could also imply a lack of resources.

The P-E Fit model has become increasingly popular as it has a number of conceptual advantages over the other models. Models or frameworks that depict stress as an event, condition or as a physiological response to a situation, are missing a fundamental part of the equation: how individual differences influence a person’s appraisal of a situation (Edwards, 1996; Lazarus & Folkman, 1984). The P-E Fit model includes this influence by "representing cognitive appraisal as the subjective comparison of a person to their environment and by distinguishing this comparison process from outcomes (e.g., French et al. 1982)" (Edwards, 1996, p. 293).

While the P-E Fit model has a number of advantages over other models it also has a number of weaknesses that make it unsuitable for use in this study. While there is general consensus around the two types of fit (P-E and S-V), there is however, debate around the merits of each type of fit. This debate is largely due to a lack of empirical research comparing the two types of fit (Edwards, 1996). Without this research it remains unclear if there is empirical justification for the P-E Fit approach and which type of fit is most predictive of stress and wellbeing (Edwards, 1996). This is further compounded by researchers discussing the fundamentally different concepts of S-V and D-A fit together under the banner of P-E Fit (Edwards & Cooper, 1990). In this way, Edwards and Cooper (1990) concluded that many studies of P-E Fit minimise the differences between the two types of fit and in some cases overlook these differences entirely.

Additionally there is little consensus within the literature as to the nature of the relationship between person and environment. Some research focuses on any discrepancy between the person and the environment, while others focus on the interaction, others still, see importance in the proportion of Person that is satisfied by Environment (Edwards, Cable, Williamson, Lambert, & Shipp, 2006). While somewhat subtle in distinction, inconsistent approaches in this area can result in vastly different outcomes and as a result "we are yet to accumulate a sound body of empirical evidence that adequately addresses the basic propositions of the P-E Fit approach to stress" (Edwards & Cooper, 1990, p. 304).

While the P-E Fit model offers a more complex description of the process than GAS there are some remaining conceptual issues that limit its application. The model does take into account an element of individual differences however, this advantage is limited by the small number of Person and Environment dimensions and reliance of the model on self reported information. For these reasons and those discussed above, the P-E Fit model is not suitable for use in this thesis.

The Demand Control Support Model

The DCS model is another frequently used framework in organisational stress research. It grew out of the Job Demand-Control (DC) model, which suggests the causes of work stress lie in the work environment rather than the attributes of the person, or some combination of the two (Karasek, 1979). Psychological strain was thought to result from "the joint effects of the demands of a work situation and the range of decision making freedom available to the workers facing those demands" (Karasek, 1979, p. 287).

The DC model made two predictions relating to work stress. Firstly, stress increases as demands increase (Karasek, 1979). Secondly, if challenges faced in the workplace are within the employee's ability to actively cope, the arousal caused by the challenge will be effectively channelled (Schaubroeck & Fink, 1998). This is the case with active jobs which are characterised by high demands and high control and therefore less susceptible to strain and stress (Dollard, Winefield, Winefield, & de Jonge, 2000). Ineffectively channelled arousal occurs when job demands are high and control is low, resulting in the maintenance of high strain (Schaubroeck & Fink, 1998). Passive jobs or jobs low in demands and control also have an absence of coping activity (Sulsky & Smith, 2005).

A third dimension, social support was later added to the model (Dollard et al. 2000). The DCS model proposes work that is high in demands, low in control, and low in social support, sees the highest risk levels for psychological disorders and results in low levels of worker satisfaction (Dollard et al. 2000). The model therefore suggests, stress can effectively be managed by decreasing demands and increasing control and support. See Figure 2 for a diagrammatical representation.

Job Demands

		Low	High		
Control	Low	Passive Job	High Stress Job	Low	Support
	High	Low Stress Job	Active Job	High	

Figure 2. DCS Model of the Stress Process (Sulsky & Smith, 2005).

The active learning hypothesis supports the DSC model and suggests high levels of learning and self efficacy are found in individuals with active jobs (Taris, Kompier, De Lange, Schaufeli, & Schreurs, 2003). The presence of personal recourses such as high levels of learning and self-efficacy were found to help facilitate feelings of productivity, accomplishment, competence, and ultimately wellbeing in employees (Dollard et al. 2000). This finding further emphasises the need for a model that can account for positive outcomes and identify the differences between a demand that results in stress and a demand that results in wellbeing.

Many of the original studies of Karasek's 1979 DCS model examined the effects of demands and control on cardiovascular outcomes and saw mixed results (Schaubroeck & Fink, 1998). While some research found the model predicted outcomes such as cardiovascular disease, myocardial infarction

(Karasek, Baker, Marxer, Alibom, & Theorell, 1981; Theorell et al. 1984), and systolic and diastolic blood pressure (Fox, Dwyer, & Ganster, 1993; Theorell et al. 1991), other studies have failed to link the model with blood pressure or other cardiovascular outcomes (Netterstrom, Kristensen, Damsgaard, Olsen, & Sjol, 1991; Reed, LaCroix, Karasek, Miller, & MacLean, 1989). This inconsistency has lead to debate around the merits of the DCS model as a description and explanation of stress and wellbeing.

While the DCS model is able to predict and explain some outcomes in relation to stress and wellbeing it does have a number of disadvantages. Consistency in regard to definitions of the three elements is a major issue for this model as, for example, different types of demands can have different outcomes (Schaubroeck & Fink, 1998). Additionally the model focuses on aspects of the job and the environment with little account for the influence of individual differences (Sulsky & Smith, 2005). The DCS model highlights the limitations of a one size fits all approach to stress and wellbeing and points to the need for a model that represents the processes involved and accounts for individual differences.

The Transactional Model

This thesis will focus on a cognitive appraisal model of stress which accounts for both the cognitive process of appraisal and cognitive-behavioural processes such as coping. The model proposed by Lazarus and Folkman (1984) is an example of a transactional model and the one that will be explored within this thesis. This model places an emphasises the process involved and allows a demand to have both a positive and a negative outcome (Lazarus & Folkman, 1984). Furthermore, the transactional model allows for the inclusion of individual differences and the influence they have on the process and outcomes.

The transactional model depicts stress as a process involving primary and secondary appraisal, situational factors, and individual differences, see Figure 3. In this way stress may arise from a progression of decisions in which people appraise their environment as stressful, not stressful, or both stressful and not stressful (Jones & Bright, 2001). For example, one individual may respond to news of a promotion with excitement and joy, while another person may react with guilt, anxiety, and apprehension. The outcome of stress or wellbeing occurs when appraisal suggests there is an imbalance either positive or negative between a demand and one's ability to cope with the situation. Figure 3 provides a diagrammatic representation of the process.

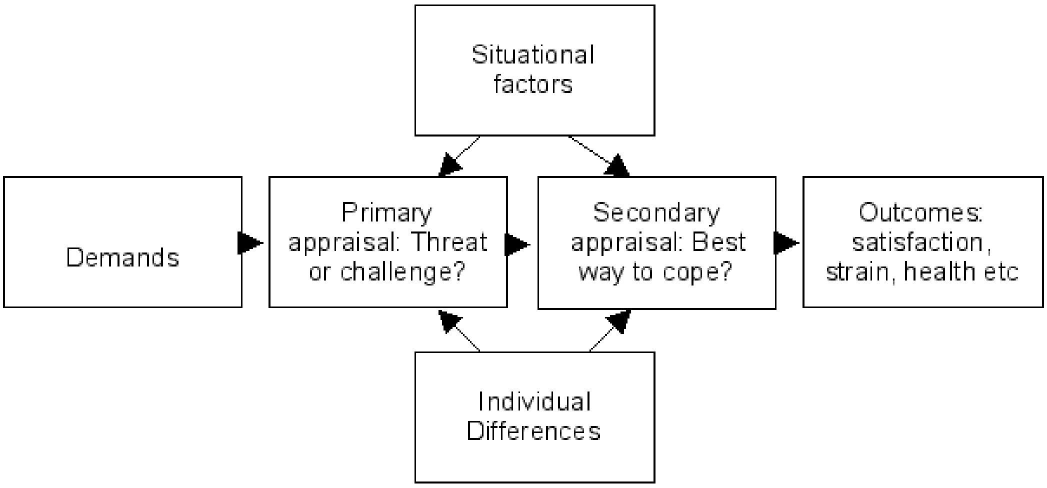

Figure 3. Transactional Model of the Stress and Wellbeing (McGowan et al. 2006).

Primary Appraisal

The transactional model of stress depicts two main decisions, primary appraisal and secondary appraisal (Lazarus, 1993). When a person is first faced with a demand, a primary appraisal is made. This involves evaluating the significance of a situation or encounter for personal wellbeing (Lazarus, Kanner, & Folkman, 1980). Primary appraisal takes into account any personal stake in the encounter and whether it poses a threat or a challenge to the individual (Lazarus, 1993). A situation can be appraised as:

1. An *irrelevant* situation with no significance which can be ignored;
2. A *benign-positive* encounter that is beneficial or desirable;
3. A *stressful* situation (Lazarus et al. 1980).

Stressful situations can in turn be seen as either:

1. Harm/loss referring to a previously experienced injury;
2. Threat, a situation in which injury is anticipated;
3. Challenge, where there is the potential for gain, growth or mastery (Lazarus et al. 1980).

Threat appraisals occur when the demands of a situation are perceived to exceed resources and frequently result in the negative outcome of stress (Skinner & Brewer, 2002). Challenge appraisals however, occur when one is confident the demands of the situation are matched by appropriate and available resources and coping skills (Lazarus et al. 1980; Skinner & Brewer, 2002). The literature has consistently concluded challenge appraisals typically use task focused coping strategies and are associated with the positive outcome of eustress and wellbeing as this is associated with the satisfaction and pleasure of meeting the challenge (Lazarus et al. 1980; Skinner & Brewer, 2002). See Figure 4 for a diagrammatic representation.

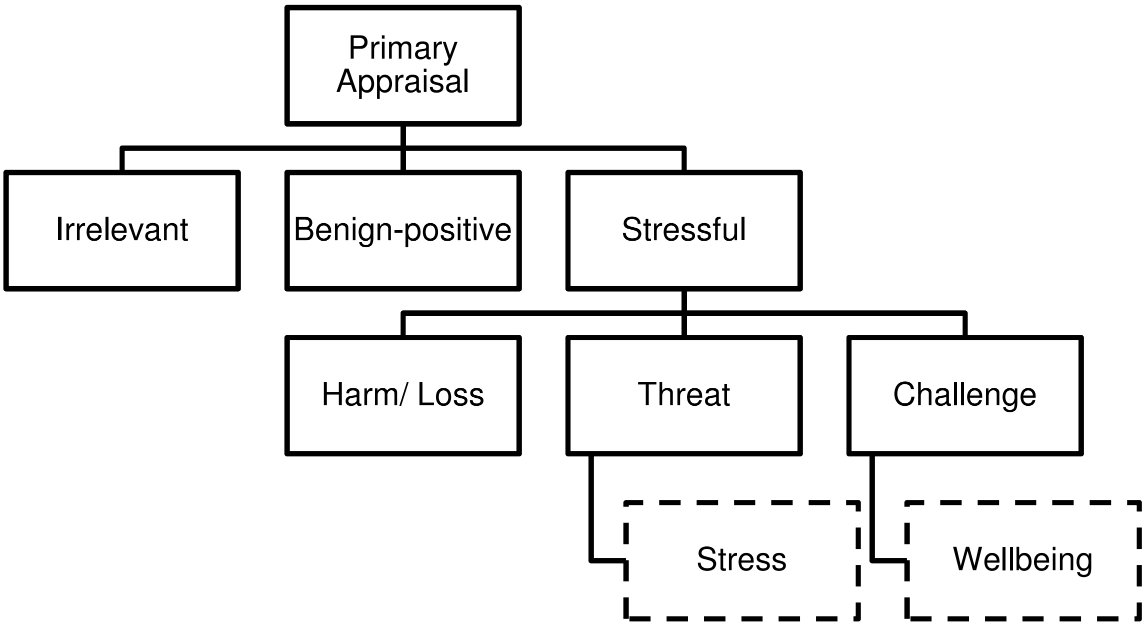

Figure 4. Primary Appraisal, Process and Outcomes.

Secondary Appraisal

Following primary appraisal, a secondary appraisal is made. This is a process of examining the available coping options and determining which coping strategy will be used to deal with the demand (Lazarus et al. 1980). Research has indicated results of the primary appraisal process influence secondary appraisal and specifically the choice of coping strategy (Lazarus, 1993). Challenge appraisals are associated with problem-focused coping which is typically used if appraisal of the situation suggests one has power to change things (Lazarus, 1993). Problem focused coping focuses directly on management of the problem or stressor and is thought to have a positive effect on adjustment (Terry & Jimmieson, 2003). In contrast, a threat appraisal suggests little or nothing can be done to change the situation and is associated with emotion-focused coping (Lazarus & Folkman, 1984). The emphasis of emotion focused coping on alleviating any distress is thought to impair adjustment (Terry & Jimmieson, 2003).

Skinner and Brewer (2002) emphasised the connection between appraisal and coping. They found a link between coping expectations, appraisal (threat or challenge), and emotion. Specifically, challenge appraisals were associated with confident coping expectations and the outcome of positive emotion (Skinner & Brewer, 2002). Furthermore, they proposed "the influence of threat and challenge appraisal styles on emotion is mediated by event-specific coping expectancies" (Skinner & Brewer, 2002, p. 679). This mediation hypothesis was partially supported suggesting coping expectations can explain some of the relationship between appraisal style (threat or challenge) and emotion (positive or negative) (Skinner & Brewer, 2002).

Coping

The Berkeley Stress and Coping Project examined in significant detail the contextual side of coping (see Lazarus & Folkman 1987 for a review). Beginning in the 1970's and running for 10 years the project concluded there were two main types of coping styles, problem-focused coping and emotion-focused coping (Lazarus, 1993). Problem focused coping is characterised by efforts to stop whatever was posing the harm or threat from occurring (Lazarus, 1993). While problem-focused coping targets the situation, emotion-focused coping places its emphasis on interpretation of the situation or how we attend to it (Lazarus, 1993). It must however be noted that while the distinction between problem and emotion focused coping provides a good framework for discussing and examining coping, not all authors agree on this two factor model (Folkman & Moskowitz, 2004). Other authors support a three factor model that includes the strategies of cognitive coping, behavioural coping, and avoidance (Billings & Moos, 1981; Folkman & Moskowitz, 2004).

When considering the relationships that may be present between forms of coping and outcomes it is important to understand the interrelationships that exist between each form of coping. As Billings and Moos (1981) put it, "the use of one coping response may be sufficient to reduce stress and thus lessen the need to use other responses from either the same or another category of coping" (p. 145). For example, an individual may first employ a strategy of thinking about what steps to take (effective coping), if this successfully eliminates the stress there is no need to employ further strategies such as using drugs or alcohol to feel better (ineffective coping). This can result in a distortion of both the categories of coping and the relationships these categories have with outcomes (Billings & Moos, 1981).

Taking this complex interrelationship into account, this study will seek to examine the factor structure of coping and the associated relationships with engagement and wellbeing as set out in the hypothesis below. For the purpose of these hypotheses, coping will be broadly identified as either effective or ineffective. Effective coping includes strategies that seek to overcome the demand and make the situation better. Ineffective coping refers to strategies e.g. substance abuse that do nothing to alter or improve the situation. It is expected effective coping strategies will be positively related to the positive outcomes of resilience, engagement, and life satisfaction. Ineffective coping strategies are expected to be negatively related to resilience, engagement, and life satisfaction. These expectations are represented in the following six hypotheses which will be justified and explored in more detail in the following sections of this thesis.

Hypothesis 1: Effective coping strategies will be positively correlated with engagement.

Hypothesis 2: Effective coping strategies will be positively correlated with life satisfaction.

Hypothesis 3: Effective coping strategies will be positively correlated with resilience.

Hypothesis 4: Ineffective coping strategies will be negatively correlated with engagement.

Hypothesis 5: Ineffective coping strategies will be negatively correlated with life satisfaction.

Hypothesis 6: Ineffective coping strategies will be negatively correlated with resilience.

Individual Differences

In addition to coping strategies, individual differences are a further factor that has been found to influence the stress and wellbeing process. This influence can be seen in the observation that responses to demanding situations were rarely consistent. Additional laboratory experiments have demonstrated the effect of stress on performance can vary with each individual (Lazarus & Eriksen, 1952). For example Lazarus and Eriksen's 1952 study on the effects of stress on skilled performance showed the same stressor could evoke a small stress response in one person and a large stress response in another, while for others there was no response (Lazarus, 1993; Lazarus & Eriksen, 1952). Even within cultural and environmental settings, considerable individual differences are found in sensitivity and vulnerability to stress (Lazarus & Folkman, 1984; Lazarus et al. 1980). Lazarus and Eriksen (1952) concluded that to explain how stressors could produce different reactions, the stress process must also take into account individual differences which influence the interaction between the stressor and the reaction.

As Figure 3 depicts, the transactional model has the ability to accommodate the influence of individual differences on the appraisal process. Individual differences can be in the form motivational drivers, commitments, and values (Lazarus et al. 1980). Commitments, values, and goals define the personal stakes an individual will have in a given situation or encounter and influence the way wellbeing is defined for each person (Lazarus et al. 1980).

The accommodation of individual differences in the transactional model is a strength of the model and one that supports its use in this thesis.

The important role situational factors and individual difference have in the stress and wellbeing process is further highlighted in an experiment reported by Lazarus (1993). Subjects were required to watch a distressing film involving either medical surgery or fatal accidents. Self reported levels of stress and autonomic nervous system activity were recorded periodically though the experiment. Prior to watching the video, a short passage of speech was used to influence the way the film was perceived and how the subjects constructed the events of the film. The passages contained themes that people use to protect themselves from threat. For example, the passage to encourage denial suggested “the people in the film are not hurt or distressed by what is happening” (Lazarus, 1993, p. 5). Other themes included intellectualisation or distancing and a passage emphasising the threat in the film. In this way, the researchers were altering situational factors (by varying the orientation passage) and observing the effect on individual’s appraisal process and in turn the ability to cope. It was found the orientation passages had an impact on both self-reported levels of stress and psychophysiological stress reactions (Lazarus, 1993). Coping strategies such as denial and distancing decreased these reactions compared to the control (no orientation passage) while the threat passage increased the stress response (Lazarus, 1993).

As discussed above, situational factors and individual differences influence both the reaction an individual will have to a given event and the outcome. This chapter has outlined a number of models of stress and wellbeing to show support for the use of the transactional model. While other models have contributed key ideas to the field, the transactional model integrates many of these and depicts stress and wellbeing as a process that caters for the influence of individual differences and allows both positive and negative outcomes. It is therefore the most appropriate model for use in this thesis which will focus on the individual differences of coping strategy and resilience and the outcomes of engagement and life satisfaction. Throughout the course of this thesis each of these concepts will be explored and defined, the relationship each variable has with the other variables of interest will also be considered, tested, and discussed. The next chapter will examine engagement and life satisfaction in detail.

CHPATER THREE: POSITIVE AND NEGATIVE OUTCOMES OF WORK DEMANDS

As outlined in the transactional model, a demand can have both a positive and negative outcome in any given situation. Negative outcomes can include for example burnout while positive outcomes can include wellbeing and engagement. This chapter will examine the positive and negative outcomes of a demand with a particular focus on stress, burnout, engagement, and life satisfaction.

Stress and Burnout

The importance of a healthy relationship with one's work has been understood for some time, as have the associated problems that result when this relationship is out of balance (Maslach, Schaufeli, & Leiter, 2001). Workplace stress is an important issue for organisations and employees. For an employee, workplace stress can have a number of negative effects for example, reduction in concentration, memory loss, increased irritability, anxiety, tension, depression, lethargy, and substance abuse to name a few (Jones & Bright, 2001). For organisations, stress can result in employee withdrawal, increased absenteeism, turnover, reduction in job satisfaction and organisational commitment, and in extreme cases an employee may suffer from burnout (Jones & Bright, 2001).

Burnout can be the result of sustained periods of stress and is broadly defined as a state of mental weariness (Schaufeli, 2003). More specifically, burnout is “a prolonged response to chronic emotional and interpersonal stressors” and consists of the following three dimensions (Maslach et al. 2001, p. 397):

1. Exhaustion: characterised by general fatigue and lack of physical and emotional resources;
2. Cynicism: a distant or indifferent attitude to work; and
3. Reduced professional efficacy: the social and non-social aspects of occupational success, for example feelings of incompetence and lack of productivity and accomplishment (Maslach et al. 2001; Schaufeli & Bakker, 2004).

The construct of burnout emerged out of increasingly prevalent social problems in the United States, rather than academic exploration (Schaufeli, 2003). The term was initially used by professionals such as lawyers, doctors, teachers, and hospice workers to describe a gradual depletion of energy, motivation, and commitment (Schaufeli, 2003). As a result, the initial understanding of burnout was at the ‘grass roots’ level, focused on descriptions and experiences as opposed to a theoretically based empirical examination or assessment of burnout as a construct (Maslach & Schaufeli, 1993; Maslach et al. 2001). During the 1970’s the increasing interest in burnout resulted in numerous papers on the topic that primarily focused on those working in health care and human services. Much of this interest was from practitioners rather than academic scholars and the initial literature was largely written by and for practitioners (Maslach & Schaufeli, 1993). The 1980's saw increasing interest in burnout from the academic community. Subsequently, standardised measures were developed and burnout attracted attention from outside the United States (Maslach & Schaufeli, 1993).

Burnout in employees is a common problem for modern organisations and can result in substantial costs for both employers and employees (Shirom, 2005). In the workplace, burnout has been linked with aspects of poor performance such as, withdrawal, absenteeism, and decreased productivity and effectiveness. Additionally, employees experiencing burnout can have a negative effect on co-workers prompting suggestions it could be contagious (Maslach et al. 2001; Schaufeli, 2003). The health implications are also of concern as burnout has been linked to for example, an increased risk for some forms of mental illness and substance abuse (Maslach et al. 2001; Schaufeli, 2003). Interestingly, research has concluded job related features such as stress and workload have a stronger relationship with burnout than demographic factors or personality (Shirom, 2005). The negative impact burnout can have on organisational outcomes and the link burnout has with workplace factors such as workload raises concerns for organisations and a desire to address the causal factors (Shirom, 2005). This motivation to address and understand burnout created an increasing interest in the positive side of the construct – engagement (Schaufeli & Bakker, 2004; Schaufeli & Salanova, 2007).

Engagement

Increasing interest in engagement combined with the emergence of positive psychology has encouraged the research community to systematically examine engagement as a concept (Schaufeli & Salanova, 2007). Engagement was initially defined as the direct opposite of burnout on all three of the dimensions (exhaustion, cynicism, and reduced professional efficacy) (Maslach & Leiter, 1997; Schaufeli & Bakker, 2004). In this way, burnout and engagement were considered to represent opposite poles on a continuum (Schaufeli & Bakker, 2004). Further research challenged this thinking and concluded that while engagement and burnout are negatively correlated they cannot be captured by a single underlying construct and therefore represent two independent states of mind (Schaufeli & Bakker, 2004; Schaufeli, Salanova, González-Romá, & Bakker, 2002).

William Kahn is often credited with sparking widespread interest in the area of job engagement and there are many models based on his 1990 paper. Kahn explored through interviews, observation, and archival data the indicators of engagement and disengagement at work (Kahn, 1990). Using two markedly different samples (summer camp counsellors and members of an architecture firm), Kahn sought to ensure his findings were relevant to a wide range of settings. Kahn concluded engagement is facilitated when one has the ability to express their 'preferred self' while performing the tasks of their job. This is based on the premise that people have preferred dimensions of themselves they choose to use given the appropriate conditions (Kahn, 1990). "The combination of employing and expressing a person's preferred self yields behaviours that bring alive the relation of the self to the role. People who are personally engaged keep their selves within a role, without sacrificing one for the other" (Kahn, 1990, p. 700).

Job engagement is broadly characterised by high energy and strong identification toward one's job (Schaufeli & Salanova, 2007). Engaged employees display a dynamic connection with the activities of their job and feel they have the resources and skills to deal with the demands of their position (Schaufeli, Bakker, & Salanova, 2006; Schaufeli & Salanova, 2007). Specifically, job engagement is defined as a positive and fulfilling state of mind, characterised by three dimensions: vigour, dedication and absorption (Schaufeli et al. 2006; Schaufeli & Salanova, 2007; Schaufeli et al. 2002).

1. Vigour refers to mental resilience at work, high energy levels, and persistence;
2. Dedication is characterised by significant involvement in one's work with feelings of enthusiasm, inspiration, challenge, and pride;
3. Finally, absorption refers to happy engrossment and intense concentration in the tasks of one's job, time passes quickly, and one finds it difficult to separate themselves from their work (Schaufeli & Salanova, 2007).

The polar relationship between burnout and engagement is however represented between two concepts of engagement and two concepts of burnout, see Figure 5. Vigour and dedication are considered the direct opposites of exhaustion and cynicism respectively (Schaufeli & Salanova, 2007; Schaufeli et al. 2002). Energy is the label given to the continuum that spans between vigour and exhaustion, while identification represents the continuum between dedication and cynicism (Schaufeli & Salanova, 2007). The third concept of engagement, absorption, is not understood as the direct opposite of lack of professional efficacy. Absorption refers to being immersed and happily engrossed in one's work, a construct distinctly different from professional efficacy (Schaufeli & Salanova, 2007; Schaufeli et al. 2002). While burnout and engagement do share the continuums of energy and identification the two concepts must be understood and examined in their own right.

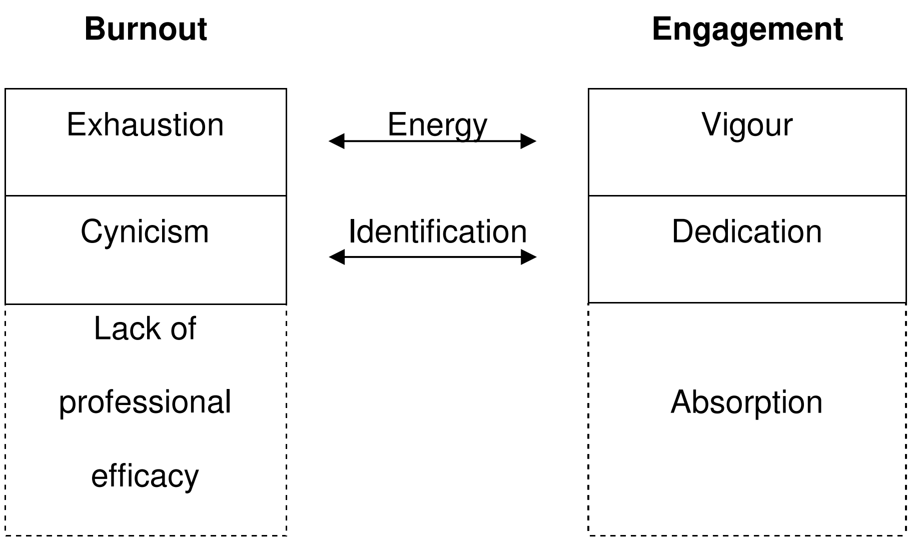

Figure 5. The Relationship Between Burnout and Engagement (Schaufeli & Salanova, 2007).

Nilsson, Bernspång, Fisher, Gustafson, and Löfgren (2007) conducted a study looking at the relationship between occupational engagement and life satisfaction in elderly people. They defined occupational engagement as "engaging in task performances (or acts of doing) that are associated with a lot of motivation" (Nilsson et al. 2007, p. 132). The magnitude of engagement was viewed as a combination of performing tasks and the motivation to perform. Nilsson et al. (2007) concluded life satisfaction was positively correlated with engagement in both leisure activities and activities of daily life. This study creates the expectation that engagement and life satisfaction will also be positively correlated in this thesis.

While the concept of engagement with work is well understood, the motivation behind why a person may become engaged is not so straight forward and may vary. Two motivations for engagement with work can be found in the utilitarian perspective and the compensatory model. The utilitarian perspective is based on the idea that "people choose to invest in roles that provide pleasure and avoid roles that produce pain or displeasure" (Rothbard & Edwards, 2003, p. 700). While the compensatory model suggests individuals are able to "make up for deficiencies experienced in one setting by engaging in more rewarding behaviour in another setting" (Champoux, 1978, p. 403). As a result, engagement with work may be purely because they receive pleasure from work or because they are trying to compensate for a lack of enjoyment in other areas of their life.

Engagement and Coping

One characteristic of engaged employees is the perception they are completely able to deal with the demands of their position (Schaufeli & Salanova, 2007). This characteristic provides a link between engagement and the use of task-focused coping strategies which typically occur when an individual feels in control of the situation and that they have the resources to cope and ability to influence (Lazarus, 1993). The common mechanism behind these two concepts suggests the presence of a positive relationship between effective coping strategies and engagement. This thesis will seek to find support for this expectation as articulated in Hypothesis 1, as outlined in Chapter Two.

Subjective Wellbeing

The notion of positive emotion and wellbeing plays a central role in both psychology and our understanding of human existence (Christopher, 1999). Wellbeing defines desirable virtues and qualities worthy of pursuit and provides a benchmark for understanding the human state of mind. “It provides a baseline from which we assess psychopathology; (and) it serves as a guide for clinical work by helping to determine the direction clients might move to alleviate distress and find fulfilment” (Christopher, 1999, p. 141). Subjective wellbeing is the common variable of interest when studying wellbeing.

Research into subjective wellbeing gained momentum in 1974 and has been focused on the how and why of positive experience in human lives (Diener, 1984). As a result, literature on the topic includes a wide range of terms including positive affect, happiness, morale, and satisfaction (Diener, 1984). However subjective wellbeing is generally agreed to consist of two components:

1. "Judgements about life satisfaction" and;
2. "Affective balance or the extent to which the level of positive affect outweighs the level of negative affect in someone's life" (Christopher, 1999, p. 143).

Life satisfaction is determined by an individual's assessment of a 'good life' and is described as a "global assessment of a person's quality of life according to his own chosen criteria" (Shin & Johnson, 1978, p. 478). It is interested with what makes people see their life in a positive way and in some instances has been used alone as a definition of subjective wellbeing. The concept of wellbeing from a personal perspective can be traced back several hundred years to Marcus Aurelius who said "no man is happy who does not think himself so" (Diener, 1984). Affective balance is the second component of subjective wellbeing and the one that most closely resembles the common definition of happiness (Diener, 1984). It examines a person's prevalence of positive over negative affect (Diener, 1984). Affective balance suggests a person is doing well or happy if they experience more positive than negative emotions (Christopher, 1999).

Eustress (constructive and healthy outcomes of pressure) has been linked with the use of challenge appraisals and task focused coping strategies (Lazarus et al. 1980; Skinner & Brewer, 2002). Furthermore, life satisfaction fits within the definition of eustress and indicates the presence of a positive psychological state. Therefore, if life satisfaction is part of eustress and eustress has a positive relationship with the use of task focused coping, it is expected life satisfaction will also have a positive relationship with task focused coping strategies. This thesis will examine this relationship and seek to find support for this expectation as outlined in Chapter Two, hypothesis 2.

This chapter has provided an overview of a number of positive and negative outcomes associated with the stress and wellbeing process. Burnout is identified as an extreme response to persistent stress that has significant consequences for both the individual and the organisation. Engagement is introduced as the positive side of burnout, a concept receiving increasing interest with the rise of positive psychology. The similarities between engagement and effective coping are explored to justify the expectation of a positive relationship in this thesis. Finally, the concept of life satisfaction is addressed within the concept of subjective wellbeing, the expectation of a positive relationship with effective coping is also addressed. The next chapter will examine the concept of resilience and the relationship it may have with the variables of interest: coping, engagement, and life satisfaction.

CHAPTER FOUR: RESILIENCE

"Resilience simply stated, is positive adaptation in response to adversity" (Waller, 2001, p. 292).

The rise of positive psychology has seen a new focus on positive constructs such as resilience. This chapter will provide a brief background into the concept of resilience and its development. Psychological capital will be explored as an example of resilience applied to the workplace. To create a clear outline of resilience as a concept, the characteristics of resilient people will be addressed along with how resilience differs from other constructs. Finally this chapter will refer to how resilience can be developed and review some studies of resilience in the workplace.

Development of the Resilience Concept

Resilience is the ability to thrive in the face of adversity, this is identified by a number of personal characteristics such as a meaningful belief system, a clear understanding of reality, good cognitive and problem solving skills, and high self-esteem (Connor & Davidson, 2003; Coutu, 2002; Dumont & Provost, 1999; Masten, 2000). Through training, these components can be identified, enhanced, and sustained in all individuals (Luthans, 2002b). Increasingly resilience has received attention from both business and the research community. As a result, the concept has been applied outside its original context of at risk children to adults and in particular to employees (Luthans & Youssef, 2007).

The concept of resilience was born out of research on at risk children. It was observed that some children grew to become successful adults, while others were never able to escape from a background of dysfunction (Dumont & Provost, 1999). Resilience was the term used to refer to whatever it was, that was allowing these children to achieve in life despite the hardship of their environment (Masten, 2000; Rak & Patterson, 1996). The reoccurring theme of this research was that "most individuals who face adversity have more positive outcomes that one might predict, based on the risk factors in their lives" (Waller, 2001, p. 291).

One of the most cited studies of resilience in children is research conducted by Werner and Smith, who in 1955 began tracking the development of 698 children born on the island of Kauai in Hawaii (Rak & Patterson, 1996; Reivich & Shattẻ, 2002). The aim of their study was to examine why under similar circumstances some children flourish while others struggle to achieve. All of the children followed in the study were considered vulnerable and had three or more of the following risk factors (Reivich & Shattẻ, 2002): "poverty, perinatal stress, family discord, divorce, parental alcoholism and parental mental illness" (Rak & Patterson, 1996, p. 368). By age 10 years, many of these children had significant developmental and behavioural issues, and by 18 years, pregnancy, arrests, and mental health issues were common (Reivich & Shattẻ, 2002). While many of the children had succumbed to a downward spiral, one child in every three (n=72) grew to be a successful achieving adult (Reivich & Shattẻ, 2002; Werner & Smith, 1992).

Werner and Smith (1982) were able to compare these successful children with the rest of the group to identify the essence of their difference. They found at birth there were a range of risk factors that could increase the vulnerability of a child, and a number of life events or situations that could act to decrease the vulnerability of a child – protective factors (Werner & Smith, 1982). Protective factors included: a good natured disposition, responsiveness to people, positive social orientation, positive self concept, good communication skills, an internal locus of control, and the desire to improve (Werner & Smith, 1982). Interestingly, the mere presence of risk factors did not make failure and hardship certain (Luthans, Youssef, & Avolio, 2007). Werner and Smith (1982) suggest "optimal development is characterised by a balance between the power of the person and the power of the social and physical environment" (p.136). In essence, it is the protective factors within the person that in part give them the ability to flourish despite their adversity. In some situations, the challenge or hardship can be the catalyst that provides the opportunity for further growth and increased resilience (Luthans et al. 2007).

Research on resilience in children clearly shows that the circumstances of one's childhood have an influence on resilience in adult years (Reivich & Shattẻ, 2002). Reivich and Shatte (2002) suggest this is because childhood circumstances shape the abilities and belief systems of an individual and these characteristics are carried into adulthood. Psychologists cannot change the past or influence the circumstances of one's childhood, but they can help people to develop the abilities and characteristics that make up resilience (Reivich & Shattẻ, 2002). Furthermore, hardship and challenge are seen as both a risk factor and an opportunity for growth. The bounce back (ability to recover) associated with resilience can result in success and development beyond the original position (Luthans et al. 2007).

Psychological Capital

The influence of positive psychology has encouraged research and theorising on the concept of resilience. Initially, resilience was also subject to the early negative focus of psychology and considered questions such as 'who is resilient' and 'what characteristics do they have' (Luthans & Youssef, 2007)? With the influence of positive psychology, resilience research has more recently highlighted the involvement of skills and psychological strengths, as well as the who and what of resilience (Luthans & Youssef, 2007). This positive psychology view of resilience has been applied to the workplace under the concept of psychological capital (Luthans, 2002a; Luthans & Youssef, 2007).

Psychological capital is defined as: "an individual's positive psychological state of development that is characterised by the following:

1. Having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks;
2. Making a positive attribution (optimism) about succeeding now and in the future;

3. Persevering towards goals and when necessary, redirecting paths to goals (hope) in order to succeed;
4. When beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success" (Luthans et al. 2007, p. 3).

Psychological capital has a firm focus on what is right with people (Luthans, 2002a, 2002b; Luthans, Vogelgesang, & Lester, 2006). It consists of the positive psychological constructs of confidence/self-efficacy, hope, optimism, and resilience (Luthans, 2002a; Luthans & Youssef, 2007). Like the traditional economic concept of financial capital, psychological capital is open to development and investment to improve performance and competitive edge (Luthans et al. 2006). Psychological capital is made up of 'who you are' (technical abilities, skills, experience, knowledge, sources of social support) and 'who you are becoming' (development) (Luthans & Youssef, 2007). It has been proposed that the psychological capital concepts of hope, confidence and optimism could act as a pathway to resilience (Luthans et al. 2006). For example, an optimistic, hopeful, and confident person is potentially more likely to bounce back from adversity than someone who does not have these characteristics (Luthans et al. 2006).

Characteristics of Resilient People

Research on resilience in many fields has identified a number of factors resilient people have in common (Masten, 2000; Masten et al. 1999; Waller, 2001). Masten and colleagues (1999) found children with good resources in the areas of effective parenting and good cognitive and thinking skills were more likely to overcome adversity than children with low resources in these areas. Adversity itself did not affect development, unless it in some way impaired these key resources (Masten, 2000; Masten et al. 1999). Additional studies have found similar variables to be related to resilience, for example, family cohesion and social support (Carbonell, Reinherz, & Giaconia, 1998) effective adjustment, problem solving, coping, and high self esteem (Dumont & Provost, 1999). These findings are consistent with the thinking that there are a number of protective factors characteristic of resilient people, these factors give us clues regarding the process of developing resilience (Masten, 2000; Waller, 2001). Research has also indicated there are a number of personal characteristics typical of resilient people (Coutu, 2002). In general, resilient people use effective coping strategies, have a firm understanding of reality, a deep and meaningful belief system, and the ability to improvise (Coutu, 2002). Additionally, resilient people have a realistic grasp of the situation and what they can influence, have an awareness and tolerance of feelings, both their own and others, and have a strong belief in the future (Caverley, 2005; Coutu, 2002; Everall, Altrows, & Paulson, 2006). These characteristics combine to give individuals the resources to cope in many situations and ultimately be resilient.

Values are another factor with an important role to play in resilience (Luthans et al. 2007). Values and beliefs provide a structure around which the world can be interpreted and understood and give meaning and consistency to one's actions and emotions (Luthans et al. 2007). People with strong beliefs can be labelled “insurgents, religious zealots, or patriots, but in the end, they all have a deep belief in something that extends their possible selves to a higher purpose” (Luthans et al. 2007, p. 120). Values and beliefs have been linked with maintained resiliency during significant psychological challenges and a positive relationship has been found between religious beliefs and mental health, happiness, and coping (Luthans et al. 2007; Wong & Mason, 2001). Additionally, acting consistently with one’s moral beliefs has been found to increase resilience, freedom, and energy (Richardson, 2002). This can be seen in the persistent commitment some individuals have to a cause, purpose, or meaning and the positive outcomes it can result in.

How Resilience Differs from Other Constructs

While resilience shares similarities with constructs such as self-efficacy, locus of control, and coping, it is important to note there are also distinct differences. These differences will be examined in the following paragraphs to provide support for classifying resilience as a construct in its own right and highlight the need to examine it separately.

On the surface, self-efficacy and resilience could appear similar constructs. Self-efficacy can be defined as an individual’s belief in their ability to perform a given task (Bandura, 1977). As a result, people with high self-efficacy, like highly resilient people, are often very successful. There are 5 particular characteristics that distinguish self-efficacious people:

1. They set high and challenging goals for themselves;

2. They welcome and thrive on this challenge;
3. They are highly self motivated;
4. They are prepared to invest the necessary time and resources to achieve the goals they set;
5. They respond well to negative feedback and will persevere through hard times (Elkin & Inkson, 2000; Luthans et al. 2007).

Highlighted by the characteristics outlined above is the tendency of self-efficacious people to act proactively. While resilience often results in the same outcome of success, self-efficacy and resilience have markedly different ways of achieving success. Self-efficacious people like to take on challenging tasks and are prepared to persevere and invest time and resources to accomplish the task and ensure success (Larson & Luthans, 2006). Self-efficacy operates in a proactive way in which an individual will take on challenging tasks only if they have confidence in their ability to succeed. In this way, self-efficacy strives to remove stress or uncertainty before it becomes an issue (Larson & Luthans, 2006). Resilience on the other hand is reactive and relates to the response given a stressful or uncertain situation. In other words, self-efficacious people seek to avoid stress and uncertainty by ensuring they have the ability and resources to overcome the stressor. Resilient people on the other hand, have the ability to succeed when faced with stress and uncertainty (Coutu, 2002).

It can be further argued that self-efficacy may serve as a means of developing resilience (Luthans et al. 2006). The more confident a person is in their ability to accomplish a given task the more likely they are to re-evaluate a failure as a learning experience and thus bounce back and develop their resilience. In this way self-efficacy has a key role in the process-focused progression of resilience (Luthans et al. 2006). The reactive use of resilience also plays a role in the development of concepts such as self-efficacy as it gives one the ability to move past and recover from an adverse event. In other words, "resilience is what allows people to keep trying and to restore their self-efficacy even after it has been challenged and predicted to decrease due to a setback" (Luthans et al. 2006, p. 31).

Locus of control is a second construct that should be distinguished from resilience. Locus of control is a trait that distinguishes people according to their perception of what or who controls the things that happen to them (Elkin & Inkson, 2000). People either have the perception that whatever happens to them is within their own control (internal locus of control) or they perceive these things to be at the control of the environment (external locus of control) (Elkin & Inkson, 2000). People with an internal locus of control believe they are in control of their future and have the ability to change a given situation (Everall et al. 2006). They also tend to take greater responsibility for their work, show initiative, and perform at very high levels (Elkin & Inkson, 2000). On the other hand, those with an external locus of control believe chance and other factors outside their control determines what happens to them (Elkin & Inkson, 2000). In sum locus of control is a mindset that describes how a person accounts for the things that happen to them. Resilience on the other hand is concerned with the actions of a person as they respond to the event or situation they are in. These differences support the classification of resilience as a distinct concept.

While internal locus of control and resilience are discrete concepts, many studies have found a positive relationship between the two (Drummond, Kysela, Alexander, McDonald, & Query, 1997; Everall et al. 2006; Werner, 1995). Smokowsaki, Reynolds, and Bezruczko (1999) conducted a study looking at resilience in 86 high school students in Chicago and found many participants displayed an internal locus of control and talked of the need for endurance and hard work to create a good life for themselves. Everall et al. (2006) link this to the common finding in resilience research, that an optimistic outlook and a clear sense of purpose promote resilience. This finding suggests that while locus of control is distinctly separate from resilience it is possible it may be a component of resilience or a concept that can aid its development (Leontopoulou, 2006). Finally, a distinction needs to be made between resilience and coping. While one component of resilience is the use of effective coping strategies, such as task-focused coping, resilience includes many more equally important concepts (Luthans & Youssef, 2007). These include a solid perception of reality, the ability to influence and improvise, a firm belief in the future, and numerous other components (Caverley, 2005; Coutu, 2002; Everall et al. 2006). Additionally, coping as a concept is built around negative events and how a person responds in these situations (Lazarus et al. 1980). While resilience can act in negative events, it is equally important in positive but challenging situations such a receiving a promotion (Luthans & Youssef, 2007).

A further difference between the concepts of coping and resilience can be found when examining the end outcome or goals of each of these concepts.

The aim of effective coping is to successfully overcome the situation and emerge with minimal damage (Lazarus, 1993). Resilience however, emphasises the bounce back or successful adaptation that occurs and frequently results in development beyond the original position (Luthans et al. 2007). This difference in end result highlights the subtle difference between the two concepts and highlights the focus resilience has on positive adaptation (Waller, 2001).

While resilience and coping are distinct concepts, the relationship they may have with each other deserves further attention. Many of the protective factors established in child research on resilience identify the development and use of effective coping strategies (Cotu, 2002). Additionally, there is strong evidence in the literature highlighting the relationship between resilience and the use of task-focused coping strategies rather than less effective emotion focused strategies (Everall et al. 2006; Jones & Bright, 2001). As effective coping strategies are considered one component of resilience it is expected they will be positively related.

As previously outlined, task-focused coping is the preferred coping style when one feels equipped to deal with the demands of their job (Lazarus, 1993). This state of mind is also characteristic of engaged employees and indicates a positive relationship between effective coping strategies and engagement (Schaufeli & Salanova, 2007). Due to the common characteristics between effective coping strategies and engagement, and the wider scope of resilience as a construct, it is expected some of the relationship between engagement and coping can be explained by commonalities between resilience and coping. It is therefore expected that resilience will act as a mediating variable in the relationship between effective coping and engagement as highlighted in hypothesis 7.

> Hypothesis 7: Resilience will mediate the relationship between effective coping strategies and engagement.

The positive nature of resilience and the success and growth it can facilitate also suggests the presence of a positive relationship between resilience and life satisfaction (Luthans & Youssef, 2007). Wellbeing (life satisfaction) is frequently identified as a positive outcome of challenge appraisals (Lazarus et al. 1980; Skinner & Brewer, 2002). The literature has also found challenge appraisals are consistently followed by the use of effective coping strategies (Lazarus et al. 1980; Skinner & Brewer, 2002). It is therefore expected effective coping and life satisfaction will be positively related. As above, because of the commonality between task-focused coping and resilience it is expected that resilience will mediate in the relationship between task-focused coping and life satisfaction.

> Hypothesis 8: Resilience will mediate the relationship between effective coping strategies and life satisfaction.

As discussed above, resilience shares a number of similarities with the concepts of self-efficacy, locus of control, and coping. While there is justification for differentiating between these three concepts and resilience, the similarities must not be overlooked. It is possible self-efficacy, locus of control, and coping are components or indicators of resilience. As the research on resilience enhances our understanding it is likely these questions will be explored and clarified. This thesis will attempt to answer some of these questions by examining the possibility that resilience acts as a mediator in the relationship between coping and the positive outcomes of life satisfaction and engagement.

Resilience at Work

Initial organisational research has indicated a positive relationship between employee resilience and performance highlighting the importance of developing resilience in the workforce (Luthans, Avolio, Walumbwa, & Li, 2005). Organisations can employ a number of strategies to encourage the development of resilience in employees such as:

1. A risk focused strategy aimed at preventing or reducing risk and stress. For example, creating an ethical and trustworthy culture that facilitates the development of internal social support networks;
2. An asset focused strategy aimed at enhancing personal and organisational resources. For example, using continuing education and

professional development to invest in employees human and social capital;

3. A process-focused strategy that is supported by employees' cognitive ability. For example, by influencing the way employees interpret events and experiences through the development of personal assets such as self-efficacy (Luthans et al. 2006).

As previously outlined, there are expected benefits from increasing resilience in employees. Unfortunately, the majority of research on resilience takes a negative approach and examines the role of resilience in dysfunctional families and at risk children (Luthans et al. 2007). As a result, the research specifically looking at the application of resilience to the workplace is limited. Preliminary research in the workplace has however returned some positive results.

In a study on Chinese workers, Luthans et al. (2005) concluded resilience was positively related to performance. This study sought to investigate the relationship between overall psychological capital and the psychological capital states of hope, resilience, optimism, and performance. Resilience was measured using items drawn from the work of Block and Kreman (1996) and Klonhlen (1996) and included items such as "*I am generous with my friends*" and *"I quickly get over and recover from being startled"* (Luthans, et al. 2005). Results indicated the positive states of hope, optimism, and resilience are positively related to performance both as individual concepts and when combined to create the psychological capital construct (Luthans, et al. 2005).

Luthans, Youssef, and Avolio (2007) support the finding of a positive relationship between resilience and organisational outcomes. They suggest resilience is related to increased organisational profitability, gains in job satisfaction, and increases in commitment to the organisation (Luthans et al. 2007). Furthermore, research has indicated the development of employees' resilience allows an organisation over time to be more adaptive and successful (Luthans et al. 2006). These findings suggest resilience is and will increasingly become a vital characteristic of successful employees and organisations.

The influence of resilience is magnified by the rapidly changing work environment we are currently experiencing. With increasing pressure and competition and decreasing boundaries between work and home, above average performance is required, merely to get, let alone achieve success (Luthans & Youssef, 2007). Employees must not only survive setbacks and challenges but thrive and flourish in the face of adversity: they must be resilient (Luthans et al. 2007). This requires researchers and practitioners to have a better understanding of how resilience operates in a workplace setting and how it can aid employees to cope with stress, change, and crisis (Caverley, 2005).

The study of resilience in the workplace is still relatively new and there is the need for further understanding around the relationship resilience has with concepts such as job satisfaction, tenure, organisational commitment, self-efficacy, coping, locus of control, and so on, and how these concepts can impact on the development of resilience (Luthans et al. 2006). This thesis will attempt to address some of these issues by examining the relationship resilience has with effective coping strategies, life satisfaction, and engagement. As articulated in hypotheses 3 (see Chapter Two), 9, and 10 it is expected resilience will have a positive relationship with all three of these concepts.

> Hypothesis 9: Resilience will have a positive relationship with engagement.
>
> Hypothesis 10: Resilience will have a positive relationship with life satisfaction.

This chapter has sought to provide a synopsis of resilience and its development as a concept to provide justification for the hypothesis in this thesis. This overview has included a brief history of resilience as it was originally understood, followed by an examination of psychological capital – the application of resilience to the workplace. When considering the distinction between resilience and concepts such as self-efficacy, locus of control, and coping, the potential for resilience to have mediating role arises and is hypothesised. Finally, a review of initial studies applying resilience in the workplace provides justification for the remaining hypothesis regarding resilience.

CHAPTER FIVE: METHOD

While appreciating the advantages and disadvantages of all approaches to research, this thesis has adopted a quantitative dominant mixed methods approach. This section will briefly define and outline the history of research approaches in psychology. The purpose of overview is to provide support for the use the current approach rather than engage in a debate over the merits of quantitative versus qualitative research.

Approaches to Research

When considering a definition of qualitative research, it is important to appreciate the complex web of interconnected, assumptions, terms, and concepts that encircle the concept of qualitative research (Denzin & Lincoln, 2000). The open-ended nature of qualitative research combined with its complex history has seen researchers become wary of offering a single definition for qualitative research. Denzin and Lincoln (2000) do however offer the following definition of qualitative research:

> Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretative, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations including field notes, interviews, conversations, photographs, recordings, and memos to

> the self. At this level, qualitative research involves an interpretative, naturalistic approach to the world. This means qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret phenomena in terms of the meanings people bring to them (p.4).

Quantitative research in contrast, emphasises the measurement and analysis of relationships between variables, as opposed to processes (Denzin & Lincoln, 2000). The focus of quantitative research is on making generalisations, predictions, and creating causal explanations (Gelesne, 2006).

> Quantitative approaches generally begin with a theory about the phenomena in question. Using theory, the researchers propose several hypotheses. Through carefully-designed subject selection strategies (often large and random) and experimental or quasi-experimental procedures, the hypotheses are tested through methods that are designed to be objective, and keep the researcher removed from subjects to avoid influencing behaviour and responses. Data are reduced to numerical indices or quantifiable bits of information, which are analysed statistically in order to make generalisations from the study group to other persons and places (Gelesne, 2006, p. 4).

Historically, psychology has been dominated by quantitative research (Johnson, Onwuegbuzie, & Turner, 2007). More recently, qualitative approaches have increased in popularity which has subsequently lead to the development of a third approach known as mixed methods (Johnson et al. 2007). As the name would suggest, the mixed methods approach includes elements of both quantitative and qualitative research and can be defined as:

> An intellectual and practical synthesis based on qualitative and quantitative research . . . It recognises the importance of traditional quantitative and qualitative research but also offers a powerful third paradigm choice that often will provide the most informative, complete, balanced, and useful research results (Johnson et al. 2007, p. 129).

Mixed methods research is generally accepted to include both a quantitative and qualitative approach, however the point and extent of mixing can vary (Johnson et al. 2007). Johnson et al. (2007) propose the inclusion of subtypes for the three main research approaches, by depicting quantitative and qualitative approaches as opposite ends of a continuum with 'pure' mixed methods as the midpoint. This concept is depicted in Figure 6.

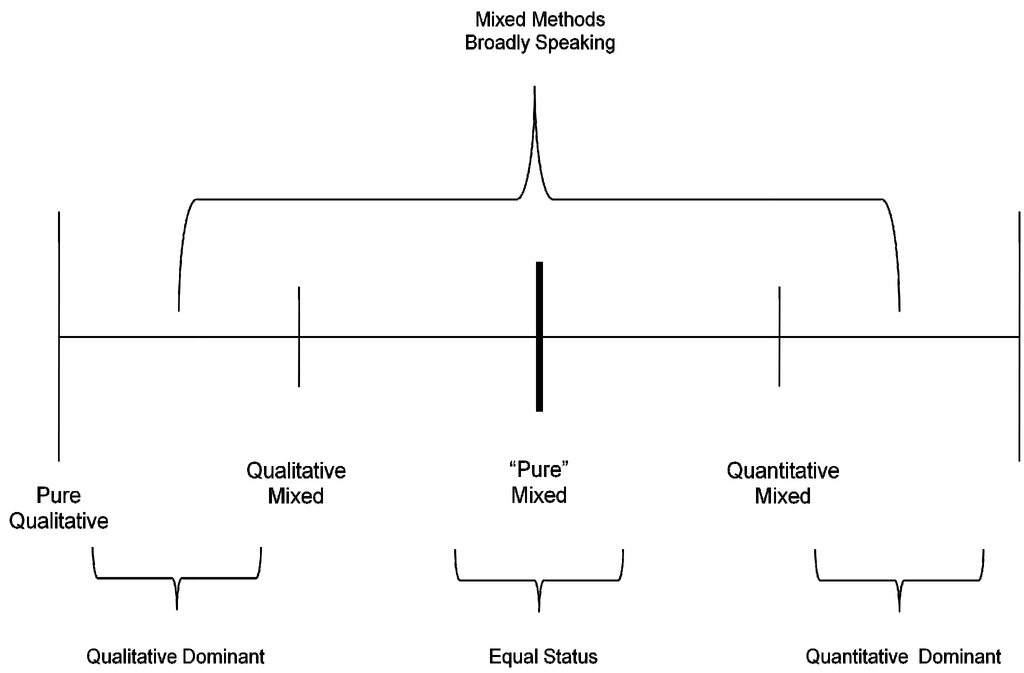

Figure 6. The Relationship Between Burnout and Engagement (Schaufeli & Salanova, 2007).

A quantitative dominant mixed methods approach has been adopted by this research and can be defined as:

> The type of mixed research which relies on a quantitative, postpositivist view of the research process, while concurrently recognising that the addition of qualitative data and approaches are likely to benefit most research projects (Johnson et al. 2007, p. 124).

Based on the distinctive characteristics of each research approach, it is evident this thesis would benefit from a quantitative approach. This approach will allow measurement and analysis in regard to the constructs of interest: resilience, engagement, coping, and life satisfaction. The advantages of qualitative data cannot be overlooked, as Johnson et al. (2007) outline, most research projects could benefit from the use of qualitative data. In this study qualitative data could provide useful insight into the sources of stress and satisfaction that could not be gained from the quantitative data.

Ethical Considerations

This research was conducted in accordance with the Massey University Ethics Committee (application number 08/004). Participants were presented with an information sheet that indicated participation was completely voluntary. Completion of the survey inferred informed consent and all data would be anonymous and confidential. This sheet is included in the Appendix. To ensure participants felt no coercion to participate they were given the option to complete the survey at home return directly to their lecturer or the researcher via free post.

Data Collection

A total of 63 students from Massey University Albany were invited to participate in this thesis. Data was collected using a pen and paper survey that was distributed to three 300 level Psychology classes and one 300 level business management class. The survey took approximately 12 minutes to complete and was distributed at the beginning of a lecture. See the Appendix for a copy of the questionnaire.

Participants

Sixty one people (97%) people responded to the survey, the majority of whom were full time female students aged 20-29. The prevalence of younger female respondents is representative of the student population (Statistics New Zealand, 2003). Only 26% of the sample had not worked in paid employment during the last two years and two respondents worked 40 or more hours combined with fulltime study. Table 1 presents the demographic information.

Table 1

Demographic Information

	n	%
Gender (n=59)		
Male	19	32
Female	40	68
Age (n=59)		
1 - 19	4	7
20-29	37	63
30-39	9	15
40-49	7	12
50+	2	3
Enrolment (n=60)		
Full time	45	75
Part time	15	25
Employment history (n=61)		
Has worked in paid employment in last 2 years	54	89
Has not worked in paid employment in last 2 years	7	11
Currently working in paid employment	45	74
Not currently working in paid employment	16	26
Average hours worked in paid employment per week (n=61)		
0	16	26
1 - 19	20	33
20-29	15	25
30-39	4	7
40-49	2	3
50+	4	7

Measures and Scale Development

Coping

Coping was measured using items from the Brief COPE designed by Carver (1997). This is a 28 item scale derived from the 60 item full COPE. The Brief COPE consists of 14 scales each of two items. Participants rated items such as "*I turn to work or other activities to take my mind off things*" on a 5-point Likert scale ranging from 1 (I usually don't do this at all) to 5 (I usually do this a lot). A high score indicated frequent use of a particular coping strategy.

Items were subject to a factor analysis using Principal Components Analysis (PCA) with a VARIMAX rotation. The Kaiser-Meyer-Oklin (KMO) value was 0.50 which indicated 50% of variance within the data could be explained by a factor structure. This is half of the optimal result of one. The Bartlett's Test of specificity was significant $X^2(378, N = 58) = 883$, $p < .001$ which indicated the data is factorable as there is intercorrelation between items.

Using Kaisers latent root criteria as described by Giles (2002), the initial extraction indicated there were 9 factors with eigenevalue values greater than one. Cattel's scree test suggested factor structures of 3 and 4 factors should be further examined.

A four factor solution accounted for 51% of variance in the data. However, the fourth factor consisting of the questions relating to religion and substance abuse was unreliable (α =.44) and was not included in further analysis. As a result, the three factor solution was chosen and accounted for 42% of variance in the data, see Table 2 for the factor loadings. One of the items relating to denial (*I refuse to believe that is has happened*) was also removed because of the negative impact it had on the reliability of factor two.

Table 2

Factor Loadings for the Three Factor Solution.

	Social Support	Active Coping	Maladaptive coping
Instrumental support 1	0.85		
Emotional support 1	0.80		
Emotional support 2	0.80		
Instrumental support 2	0.75		
Positive reframing 1	0.55		
Planning 1		0.73	
Planning 2		0.66	
Active coping 2		0.64	
Behavioural disengagement 1		0.63	
Active coping 1		0.57	
Positive reframe 2		0.52	
Acceptance 1		0.50	
Acceptance 2		0.39	
Self distraction 1			0.76
Self blame 2			0.69
Self blame 1			0.63
Self distraction 2			0.61
Venting 1			0.51
Humour 1			0.49
Humour 2			0.45
Denial 2			0.44
Behavioural disengagement 2			0.43
Venting 2			0.40

The first factor accounted for 14% of variance in the data and consisted of five items, (α =.83). Factor one included items such as "*I get help and advice from other people.*" These items included the four social support items and an additional fifth item, "*I try to see it in a different light to make it seem more positive."* The items in Factor One are linked with drawing support from outside one's self so Factor One was named Social Support.

The second factor accounted for 14% of variance in the data and included eight items, (α =.79) for example "*I think about what steps to take*," "*I try to come up with a strategy about what to do*", and "*I take action to try and make the situation better*." These items are all linked with taking active steps to alter the situation thus Factor Two was called Task-focused Coping.

The third factor accounted for 13.6% of variance in the data and consisted of ten items, (α =.75). These items included "*I do something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping or shopping,"* "*I criticise myself*", and "*I blame myself for things that happen*". The items in Factor Three are coping strategies that seek to avoid demands and place blame, Factor Three was named Maladaptive Coping.

For each factor a scale score was computed from the sum of items.

Resilience

Resilience was measured using 23 of 25 items from the Connor-Davidson Resilience Scale (CD-RISC) (Connor & Davidson, 2006). Two questions were removed to make the scale more appropriate for a New Zealand audience and a student sample ("*sometimes fate or God can help"* and "*I felt I had to make unpopular or difficult decisions"*). Participants rated items such as "*I felt I could bounce back after illness or hardship*" on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). A higher score indicated increasing presence of resilient traits. Items were subject to a factor analysis using Principal Components Analysis (PCA) with a VARIMAX rotation. A single factor solution accounted for 35% of the variance (α =.90).

Engagement

Engagement was measured using items from the Utrecht Work Engagement Scale-9 (UWES-9) designed by Schaufeli et al. (2006). This is a nine item scale that measured how people feel about their work. Participants rated the frequency with which they identify with statements such as "*at work, I feel bursting with energy*" on a 5-point Likert scale ranging from 1 (never) to 5 (always / every day). A high score indicated increasing engagement with one's work. A factor analysis was conducted using Principal Components Analysis (PCA) with a VARIMAX rotation. A single factor solution was found to account for 55% of the variance (α =.90).

Wellbeing

Wellbeing was measured using the Satisfaction with Life Scale (SWLS) (Diener, Emmons, Larsen & Griffin, 1985). This is a five item scale (α =.80) that measures global cognitive assessments of one's life (Deiner et al. 1985). Participants rate items such as "*In most ways my life is close to my ideal*" on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Items were subject to a factor analysis using Principal Components Analysis (PCA) with a VARIMAX rotation. A single factor solution accounted for 58% of the variance (α =.80).

Sources of Stress and Satisfaction

Participants were asked two open-ended questions designed to identify the main sources of stress and satisfaction in their work. They were as follows:

1. What are the two main sources of satisfaction in your study/work?
2. What are the two main sources of stress in your study/work?

Data Analysis

Bivariate correlations were assessed using one-tailed Pearson's correlation coefficients. Comparisons between groups were assessed using t-tests and one way ANOVA as appropriate.

Moderation

The possibility of moderation was investigated using the procedure outlined by Baron and Kenny (1986) and included:

1. To reduce the dangers of multicollinearity the independent variable and the proposed moderator were centred before the analysis was carried out;
2. The first step was to regress the dependent variable onto the independent variables;
3. The second step was to add the interaction term in the second block of a hierarchical regression. Moderation is present if the interaction term is a statistically significant predictor.

Mediation

Mediation hypotheses were tested using the procedure recommended by Baron and Kenny (1986) and included the following three steps:

1. The first step was to check for a significant relationship between the independent variable and the dependent variable;
2. The second step requires a significant relationship between the independent variable and the mediator;
3. The final step in testing mediation is to regress the dependent variable onto the mediator and the independent variable together. Mediation is

present if the previously significant relationship between the independent variable and dependent variable is no longer significant.

Thematic Analysis

The qualitative data around sources of stress and satisfaction was subject to a realist interpretation of a thematic analysis (Braun & Clarke, 2006). This realist interpretation has a focus on reporting "experiences, meanings and the reality of participants" (Braun & Clarke, 2006, p. 81). Thematic analysis is a process of encoding qualitative data in a way that identifies and analyses patterns and themes (Boyatzis,1998; Braun & Clarke, 2006). A theme can be defined as a pattern in the data that at the very least describes and organises and at the very most interprets aspects of the phenomenon (Boyatzis, 1998).

The procedure outlined in Braun and Clarke (2006) was applied in this analysis and consisted of the following six phases:

1. Familiarisation with the data, reading re-reading and noting down initial ideas;
2. Generation of initial codes, coding interesting features of the data and allocating data to codes;
3. Searching for themes, collating codes into potential themes;
4. Reviewing themes, checking viability of themes and creation of a thematic map;

5. Defining and naming themes, ongoing refinement of themes, generating clear definitions and names for each theme;
6. Producing the report.

CHAPTER SIX: RESULTS

This chapter presents the results of analysis conducted to examine the ten hypothesis of this thesis.

Between Groups Comparisons

Male respondents had higher levels of resilience than female respondents $t(56) = 2.86$, $p > .01$.

There was no difference in resilience levels between participants who:

1. Were enrolled full time and those enrolled part time $t(57) = 0.89$, $p > .05$;
2. Worked in paid employment during the last 2 years and those who have not $t(57) = 0.71$, $p > .05$;
3. Were currently working and those who are not $t(57) = 0.89$, $p > .05$;
4. Worked less than 15 hours per week and those who worked more than 15 hours per week $t(57) = -1.78$, $p >.05$.

Additionally, resilience levels did not differ with age $F(4,53) = 1.36$, $p > .05$, or between course $F(3,55) = 1.88$, $p > .05$.

The implications of these findings will be examined in Chapter Seven.

Correlations

Table 3

Bivariate Correlations

Scale	1	2	3	4	5	6
1. Task-focused Coping						
2. Maladaptive Coping	0.04					
3. Social Support	.35**	0.13				
4. Resilience	.46**	0.03	0.15			
5. Engagement	.31*	-0.05	0.09	.56**		
6. Life Satisfaction	.29*	-0.29*	.28*	.35**	0.26	
M	32.33	27.73	17.52	88.54	32.4	17.87
SD	4.55	6.01	3.85	11.09	6.65	3.82
* $p < .05$, ** $p < .01$						

Hypotheses 1-3 were supported, as task-focused coping was positively and significantly correlated with engagement, life satisfaction, and resilience.

Hypothesis 4-6 examined the relationship of maladaptive coping strategies to outcomes.

Hypothesis 4 proposed that maladaptive coping strategies would be negatively correlated with engagement. This hypothesis was not supported as no significant correlation was found.

Ineffective coping was negatively correlated with life satisfaction supporting hypothesis 5.

It was hypothesised that resilience would be negatively correlated with maladaptive coping (hypothesis 6). This hypothesis was not supported as no significant relationship was found.

It was hypothesised that resilience would be positively related to engagement, (hypothesis 9) and life satisfaction (hypothesis 10). Both of these hypotheses were supported.

The correlation analysis demonstrated the importance of examining task-focused coping and social support separately as two distinct forms of coping (Table 3). Social support had a significant positive correlation with task-focused coping which was expected as both task-focused coping and social support are considered to be forms of effective coping. Interestingly, while task-focused coping was significantly correlated with resilience and engagement, social support was not correlated with either of these variables. The implications of these correlations will be further examined in Chapter Seven.

In summary, resilience was positively associated with task-focused coping, engagement, and life satisfaction as expected, but was unrelated to maladaptive coping. Life satisfaction had a positive association with task-focused coping and a negative association with maladaptive coping. Likewise, task-focused coping was associated with engagement and life satisfaction as expected. However, contrary to expectations, maladaptive coping had no relationship with engagement.

Moderation

Of interest is the lack of significant relationships between maladaptive coping and the other variables with the exception of life satisfaction. The negative relationship between maladaptive coping and life satisfaction is of particular interest as life satisfaction was positively associated with all of the other variables with the exception of engagement, which had no relationship. It is possible resilience may have been moderating a relationship between maladaptive coping and life satisfaction. The relationship between resilience and positive outcomes could suggest the relationship between maladaptive coping and life satisfaction may only be present when resilience is low (Luthans & Youssef, 2007). This possibility was tested using regression, see Table 4.

Table 4

Resilience as a Moderator in the Relationship Between Maladaptive Coping and Life Satisfaction.

	DV	IV	B	β	Multiple R	Adj. R^2	F
Step 1					0.42	0.15	5.96**
	Life Satisfaction	Resilience	0.12	0.36**			
		Maladaptive Coping	-0.15	-0.23			
Step 2					0.43	0.14	4.15*
	Life Satisfaction	Resilience	0.12	0.35**			
		Maladaptive Coping	-0.14	-0.21			
		Resilience X Life satisfaction	-0.01	-0.1			

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

As outlined in Table 4, the first step in the moderation analysis was to regress the dependent variable (life satisfaction) onto the independent variables (resilience and maladaptive coping). The second saw the addition of the interaction term (resilience X life satisfaction) in the second block of a hierarchical regression. Inclusion of the interaction term at step two did not account for significant additional variance therefore it can be concluded resilience was not acting as a moderator in the relationship between maladaptive coping and life satisfaction.

Mediation

A three step analysis was carried out to test hypothesis 7 that resilience would mediate the relationship between task-focused coping and engagement. The results are presented in Table 5.

Table 5

Resilience as a Mediator in the Relationship Between Task-Focused Coping and Engagement.

	DV	IV	B	β	Multiple R	Adj. R^2	F	Sobel z
Hypothesis 6								
Step 1					0.31	0.8	5.54*	
	Engagement	Task-focused Coping	.45*	0.31*				
Step 2					0.46	0.2	14.19**	
	Resilience	Task-focused Coping	1.06**	0.46**				
Step 3					0.56	0.29	11.63**	2.75**
	Engagement	Task-focused Coping	0.10	0.07				
		Resilience	0.33**	0.53**				

* p < .05, ** p < .01

As Table 5 indicates, the independent variable (task-focused coping) was significantly related to both the dependent variable (engagement) and to the mediator (resilience) at steps one and two respectively. When resilience and task-focused coping together were included in the regression at step three, the relationship between task-focused coping and engagement was no longer significant. Baron and Kenny (1986) suggest this indicates that resilience fully mediated the relationship between task-focused coping and engagement.

The same three-step analysis was then used to test hypothesis 10 which proposed that resilience would mediate the relationship between task-focused coping and life satisfaction. The results of this analysis are presented in Table 6.

Table 6

Resilience as a Mediator in the Relationship Between Task-Focused Coping and Life Satisfaction.

	DV	IV	B	β	Multiple R	Adj. R^2	F	Sobel z
Hypothesis 10								
Step 1					0.29	0.06	4.86*	
	Life Satisfaction	Task-focused coping	0.27*	0.33*				
Step 2					0.46	0.20	14.19**	
	Resilience	Task-focused coping	1.06**	0.46**				
Step 3					0.37	1.06	4.20*	1.26
	Life Satisfaction	Task-focused coping	0.19	0.24				
		Resilience	0.07	0.19				

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

As Table 6 indicates, the independent variable (task-focused coping) was significantly related to both the dependent variable (life satisfaction) and to the mediator (resilience) at steps one and two respectively. When resilience and task-focused coping together were included in the regression at step three, the relationship between task-focused coping and life satisfaction was no longer significant. At first glance this seems to be indicating the presence of mediation however at step three there is also no significant relationship between life satisfaction and resilience. Barron and Kenny (1986) further specify in the third equation that the mediator must influence the dependent variable, as this is not the case there is no evidence for mediation in this analysis.

Thematic Analysis

The initial stage of the thematic analysis involved searching the data for themes and generating initial codes. Analysis of the sources of satisfaction data returned five initial themes that captured the main ideas. These are displayed in Table 7 and include achievement, success, acquisition of knowledge, socialisation, and positive feedback.

Table 7

Initial Thematic Categories for Sources of Satisfaction.

Theme	**Definition**	**Example**
Achievement	Statements that refer to completing or achieving a task or group of tasks.	"I started university later in my working life (approx 20 years). The past 3 years of study mixing with family life / work career has been interesting. Each year done knowing I will have a degree at the end is satisfying."
Success	Statements with reference to the positive outcomes.	"Good outcome after spending lots of time and effort."
Acquisition of knowledge	Statements that refer to gaining knowledge or skills.	"Learning and expanding my knowledge base."
Socialisation	Statements with references to contact with other people.	"Working with friendly people that I get along with."
Positive feedback	Statements that refer to praise or affirmation.	"Excellent feedback from a client."

During the later phases of thematic analysis researchers are called to review and further refine the themes (Braun & Clarke, 2006). This process revealed the presence of a smaller number of underlying main themes in the data. For example, success and achievement while distinctly different sub themes can be linked back to a common main theme of accomplishment. Similarly, socialisation and positive feedback can be linked to a common idea of self affirmation. Acquisition of knowledge on the other hand was considered to be a main theme in itself. See Figure 7 for a thematic map showing the main and sub themes for sources of satisfaction.

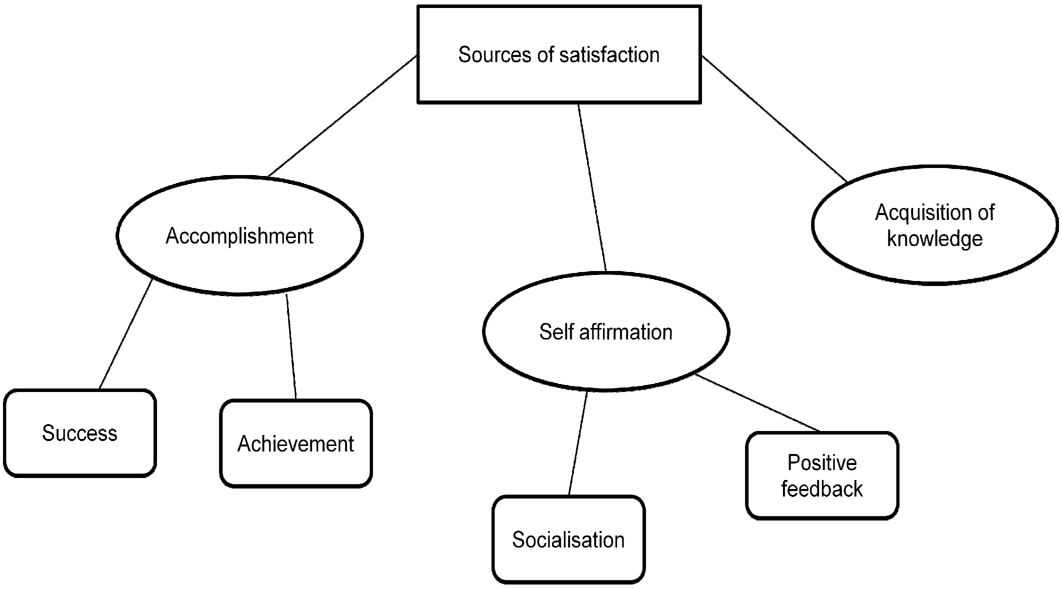

Figure 7. Sources of Satisfaction Thematic Map Showing Three Main Themes and Four Subthemes.

The same process was applied to the sources of stress data. Analysis of the key ideas in the sources of stress data revealed six initial themes. These are presented in Table 8 and include, workload, assessments, work life balance, pressure, failure, and uncertainty.

Table 8

Initial Thematic Categories for Sources of Stress.

Theme	**Definition**	**Example**
Workload	Statements with reference to the amount or volume of work required.	"Working 3 days a week, part time job, full time study."
Assessments	Statements that refer to a form of assessment.	"Essays - absolutely sick of them. Exams - absolutely sick of them."
Work life balance	Statements with reference to combining the demands of work/study with those of family or other activities.	"Balancing the needs of my kids, husband, house, husband's accounts, social life, pets, extended family and finding a bit of time for me!"
Pressure	Statements that refer to a strain due to internal factors such as desire for success or external factors such as time pressure.	"Putting pressure on myself to get the best available mark" or "time pressures."
Failure	Statements with reference to lack of achievement or success.	"Unable to deliver work to what I consider a high/ good standard."
Uncertainty	Statements that refer to uncertain or unclear expectation.	"Not understanding what is required."

Refinement of the initial themes for sources of stress revealed the presence of two main themes underlying the key messages in the data. Desire for success was identified as the common theme behind assessment, failure, and uncertainty. Similarly, competing interests was identified as the theme behind the sub themes of pressure, work life balance, and workload. See Figure 8 for a thematic map showing the main and sub themes for sources of stress.

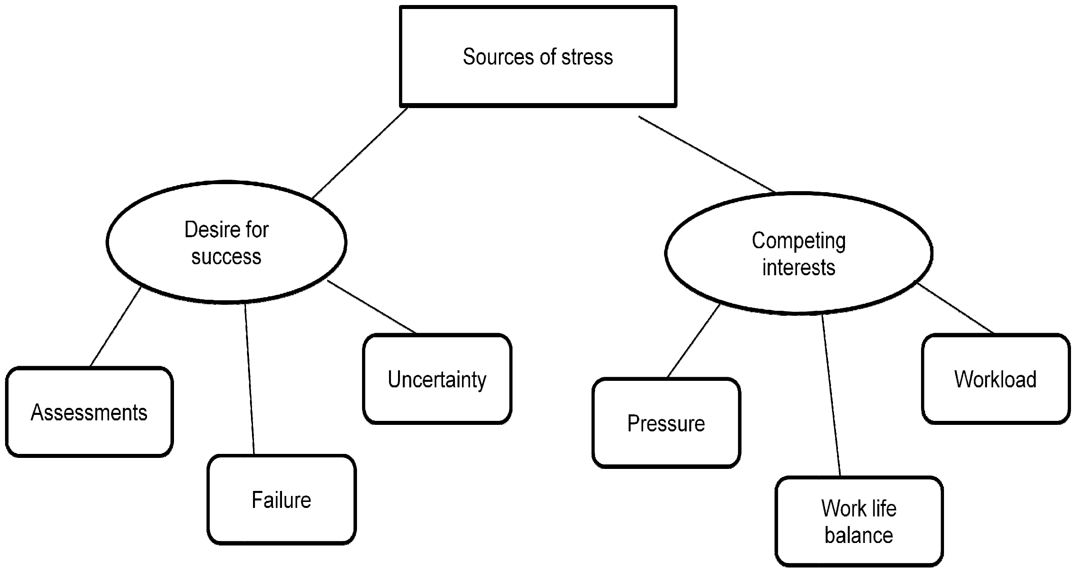

Figure 8. Sources of Stress Thematic Map Showing Two Main Themes and Six Subthemes.

Analysis of all of the main themes revealed accomplishment was the most frequently identified source of satisfaction while competing interests was the most frequently identified source of stress. Figure 9 represents frequencies for all of the themes.

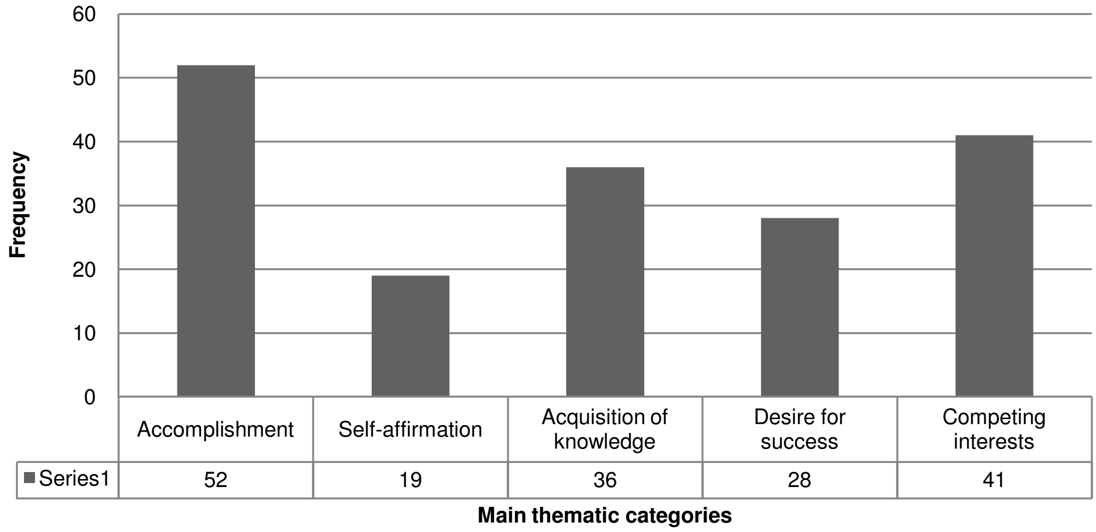

Figure 9. Frequency of Main Thematic Categories.

When considering the main themes it is interesting to note the similar mechanism behind the accomplishment as a source of satisfaction and desire for success as a source of stress. Interestingly, of the 52 participants who identified accomplishment as a source of satisfaction, 17 also identified desire for success as a source of stress.

The relationship between the main themes and the other variables examined in this study warrants further investigation. T-tests were used to compare scores for each of the measured variables between participants who did identify a main theme as a source of satisfaction or stress against those who did not. No significant differences were found indicating sources of stress and satisfaction are not influenced by resilience, coping, engagement, and life satisfaction. This finding will be further examined in Chapter Seven.

This results chapter has presented the outcome of analysis conducted to test the hypothesis of this thesis. This has included the results of T-tests, correlations analysis, tests of mediation and moderation, and finally a thematic analysis. The implications of these findings will be discussed in the remaining chapters of this thesis.

CHAPTER SEVEN: DISCUSSION

This chapter represents the point where the literature, analyses, and findings of this study come together to both support and enhance knowledge in the areas of resilience and wellbeing. A number of ideas emerge out of this combination of past and present research to facilitate discussion.

The emergence of positive psychology has sparked an interest in positive concepts such as resilience, engagement, and life satisfaction (Seligman & Csikszentmihalyi, 2000). An increasing emphasis is being placed on enhancing wellbeing as opposed to purely preventing or reducing stress. Positive psychology represents a shift from reacting to and treating symptoms in which problems are addressed once they have occurred, to the science of prevention that would see early intervention to prevent harm and ill-health arising.

The coping literature is of particular interest to positive psychologists as it is this process that will frequently determine whether an individual experiences positive or negative emotions from a given demand (Lazarus et al. 1980). This interest has highlighted the need for models of stress and coping that address both positive and negative events. The transactional model used in this thesis is able to accommodate this expanded role of coping as it places an emphasis on the process involved (Jones & Bright, 2001). This model is used as a framework to identify the forms of coping potentially available for application during secondary appraisal, and determine how the individual differences of resilience and coping, influence outcomes such as engagement with work and life satisfaction. See Figure 3 for a diagrammatic representation of the transactional model.

Resilience

Between group comparisons in this study revealed resilience levels were comparable across age, study, work commitments, and working experience. The only between group difference for resilience levels was in gender where male participants displayed higher levels of resilience than female participants. This finding is inconsistent with previous research that has indicated both no group differences in gender, and that females have higher resilience (Connor & Davidson, 2003; Masten et al. 1999). Using the same resilience scale, CD-RISC, Connor and Davidson (2003) observed no group differences across age, racial group, or gender. Conversely, Masten et al. (1999) found females to be more resilient. Masten and colleagues identified participants in their study as resilient, maladaptive, or competent, using measures of competence and adversity. They identified 43 individuals as resilient, 17 of which were male, 26 female. As outlined above, the literature has differing results regarding gender differences in resilience, however this relationship was not explored in-depth within this thesis.

As Chapter Four highlights, there has been increasing interest in the concept of resilience and in particular the relationship it may have with coping. Consistent with expectations, this thesis found a positive relationship between task-focused coping and resilience. The use of effective coping strategies have consistently be identified as a key characteristic of resilient people (Coutu, 2002; Dumont & Provost, 1999; Everall et al. 2006; Jones & Bright, 2001). The common characteristics resilience shares with task-focused coping and life satisfaction suggest resilience may be able to account for some of the positive relationship between the two variables. However, contrary to expectations, resilience did not act as a mediator in the relationship between task-focused coping and life satisfaction. In other words, higher levels of task focused coping did not lead to higher resilience levels and subsequently, higher life satisfaction. Further research is required to further understand the way resilience and coping interact with each other and positive outcomes.

As discussed above, resilience has a key relationship with effective coping. This thesis has also concluded that social support and task-focused coping can be considered forms of effective coping (this finding will be addressed in depth in subsequent paragraphs of this Discussion). Given these relationships, it was expected that resilience and social support would have a positive relationship. However, contrary to expectations, no relationship was found between these variables. This finding negates previous research which has identified social support as a protective factor characteristic of resilient people (Carbonell, Reinherz, & Giaconia, 1998). This finding highlights the need for further research to address the relationship between resilience and coping.

The results of this thesis showed, resilience had no relationship with maladaptive coping. Currently the literature provides little guidance around the relationship between resilience and maladaptive coping. As previously identified, effective coping strategies are a key characteristic of resilience and are typically associated with positive outcomes (Coutu, 2002; Lazarus et al. 1980; Skinner & Brewer, 2002). Maladaptive coping strategies on the other hand are associated with negative outcomes (Lazarus et al. 1980; Skinner & Brewer, 2002). Consequently, this thesis hypothesised that maladaptive coping would have a negative relationship with resilience. Correlation analyses did not support this thinking and revealed no relationship between resilience and maladaptive coping. A possible explanation for the lack of relationship between these two variables is that positive personal characteristics such as resilience may boost the positive pathway and increase positive outcomes but have no affect on the negative path and the frequency or level of negative outcomes. The lack of relationship between maladaptive coping and resilience further highlights the complexity around distinguishing between forms of coping and predicting the situations for their use pointing to the need for further research in the area.

The positive relationship resilience displayed with engagement is consistent with the hypotheses of this thesis. Expectations of a positive relationship with engagement can be drawn from the relationship between task-focused coping and engagement. As task-focused coping and resilience have a clear positive relationship and task-focused coping was found to have a positive relationship with engagement, it follows that resilience would also have a positive relationship with engagement (Coutu, 2002; Jones & Bright, 2001). The positive relationship found in this study clarifies understanding on how resilience relates to engagement and thus add to the body of literature.

Consistent with expectations, resilience also displayed a positive relationship with life satisfaction. While not explicitly linked in the literature, expectations of a positive relationship with life satisfaction can be found in the definitions of both constructs. This finding further clarifies how resilience relates to positive outcomes and thus adds to the resilience literature.

The commonalities resilience shares with both task-focused coping and engagement leads to the hypothesis that resilience has a mediating effect on the relationship between task-focused coping and engagement. As expected, resilience acted as a mediator in the relationship between task-focused coping and engagement. This indicates that some of the relationship between task-focused coping and engagement can be accounted for by the relationship each variable has with resilience.

Using factor analysis, this thesis identified three forms of coping: task-focused coping, social support, and maladaptive coping. While correlation analysis revealed a significant relationship between task-focused coping and social support, they must be considered two distinct forms of coping. Task-focused coping is characterised by actively taking steps to overcome or alter the situation, on the other hand social support is characterised by drawing support from others (Lazarus, 1993). Interestingly, neither task-focused coping nor social support displayed a relationship with maladaptive coping. This indicates social support could be considered a form of effective coping as opposed to a form of ineffective coping.

The classification of social support and task-focused coping as forms of effective coping is consistent with the coping literature. Previous research has found social support as a coping strategy relates to outcomes in a similar way to problem or task-focused coping (Folkman & Moskowitz, 2004). Similar relationships were found in this study where task-focused coping and social support displayed comparable correlations with life satisfaction. Relationships with the other outcomes in this study however did not confirm to this trend. Specifically, task-focused coping displayed a significant relationship with resilience and engagement while social support displayed no relationship with either variable. This difference further supports the differentiation between task-focused coping and social support as distinct forms of effective coping.

The literature offers few explanations as to the inconsistent relationships task-focused coping and social support displayed with resilience and engagement. The focus of coping research to date has been on negative outcomes from maladaptive or emotion-focused coping (Folkman & Moskowitz, 2004). This has resulted in a body of literature that clearly understands the negative emotions associated with stress and coping at the expense of understanding positive outcomes (Folkman & Moskowitz, 2000, 2004). Escapist, avoidant, and maladaptive coping strategies have consistently been associated with poor mental health outcomes but the relationship between effective forms of coping and positive outcomes is not so well understood (Folkman & Moskowitz, 2004). Further research is required to extend the body of research specifically examining the relationship between the difference forms of coping and positive outcomes.

As previously discussed, this thesis found evidence to support the classification of social support as a form of effective coping (Folkman & Moskowitz, 2004). As a result, social support was expected to have a positive relationship with life satisfaction and engagement. In line with this expectation, a positive relationship was found between social support and life satisfaction. However, no relationship was found between social support and engagement. This is potentially because the very nature of social support may hinder engagement with work. Further research is required to develop a deeper understanding of how different coping strategies relate to each other and other variables such as engagement.

No relationship was found between the constructs of maladaptive coping and engagement. This absence of a relationship is of interest as the literature suggests a negative relationship could be expected (Schaufeli et al. 2006). This expectation is based on the characteristics of engagement: a dynamic connection with the activities of one's job and the perception of available skills which are not consistent with the characteristics of maladaptive coping strategies (Schaufeli & Salanova, 2007). One explanation for the lack of relationship between maladaptive coping and engagement is that engagement with work may serve as the product of different coping strategies for different situations and people. For example, for an individual experiencing a work related demand, engagement with work may be a form of effective coping as they seek to actively address the issue. If engagement with work served to directly address an issue, a negative relationship between engagement and maladaptive coping would be expected. On the other hand, an individual experiencing a personal demand may increase engagement with work as a means of avoiding issues in their personal life (Rothbard & Edwards, 2003). Engagement as an avoidance strategy would see a positive relationship between engagement and maladaptive coping. In this way, maladaptive coping could display both positive and negative relationships with engagement resulting in the conclusion there is no clear relationship. While this thesis offers a potential explanation, further research is required to investigate this possibility and determine the specifics of when engagement serves as the product of each coping strategy. This further research could also help to explain the absence of a relationship between social support and engagement.

Life satisfaction was a variable that maladaptive coping displayed a significant relationship with. As expected, a negative relationship was found however, contrary to expectations this relationship was not moderated by resilience. This finding indicates a negative relationship between maladaptive coping and life satisfaction is present regardless of resilience level. In other words, resilience did not counter the negative effects maladaptive coping has on life satisfaction. This suggests there may be some limits to the protective qualities of resilience. Alternatively, the relationship between maladaptive coping, life satisfaction, and resilience may be affected by time. For example, when facing a demand and employing a maladaptive coping strategy, life satisfaction may be low regardless of resilience level. However, after the demand has passed life satisfaction may be higher for those with higher resilience levels. Further research is required to investigate these possibilities and further develop our understanding of resilience.

Interestingly, no significant relationship was found between engagement and life satisfaction. When considering the definitions of both constructs it is surprising to see there is no relationship between the presence of a positive and fulfilling state of mind that characterises engagement and seeing one's life in a positive light – life satisfaction (Schaufeli et al. 2006; Schaufeli & Salanova, 2007; Schaufeli et al. 2002; Shin & Johnson, 1978). While a positive relationship was not specifically hypothesised in this study, the absence of any relationship was contrary to expectations.

The utilitarian perspective and the compensatory model potentially offer an explanation for the lack of relationship between engagement and life satisfaction. The utilitarian perspective suggests an individual will invest time in activities that bring them pleasure and avoid activities that result in displeasure (Rothbard & Edwards, 2003). The compensatory model adds to this by suggesting one can compensate for a lack of pleasure in one area of their life by seeking more rewarding behaviour in another area (Champoux, 1978). These concepts support the idea that engagement with work could act as tool for escaping dissatisfaction in other areas of life. Underlying this explanation is the point that the concepts of engagement with work and life satisfaction are focused on different domains. While these domains will overlap in some areas, it is too simplistic to identify them as the same. As a result, it is possible for spill over to occur in which one area could be used to compensate for the other (Rothbard & Edwards, 2003). Further research is required to investigate this possibility.

Sources of Stress and Satisfaction

The thematic analysis revealed three main sources of stress and two main sources of satisfaction (see Figures 7 and 8). Of particular interest are the themes of accomplishment (a source of satisfaction) and desire for success (a source of stress). The common demand behind these two themes suggests a single aspect of work or study can be both a source of stress and a source of satisfaction. For example, assessment was a frequently identified source of stress that falls into the category of desire for success, on the other hand, achieving a good grade was frequently identified as a source of satisfaction that falls into the accomplishment theme. Without assignments and tests students would not experience the stress associated with assessments however, they would also not experience the satisfaction associated with getting a good grade. The desire to achieve that motivates people is frequently a source of stress however the result of success and achievement are a source of satisfaction for many people. This finding suggests the path to achievement consists of both stress and satisfaction.

The transactional model supports this finding and allows the same demand to have a positive and a negative outcome (Jones & Bright, 2001). This model suggests appraisal (primary and secondary) combined with individual differences and situational factors will determine the outcome for each individual (Lazarus & Folkman, 1984). Whether a demand becomes a source of stress or a source of satisfaction is influenced by which resources are seen as available and the coping strategy chosen (Lazarus & Folkman, 1984). If one perceives they have access to relevant resources such as expertise, information, time and so on, they are likely to interpret the assignment or test as a challenge and embark on a process of effective coping. This will typically result in feelings of satisfaction. Conversely, if one does not feel they have access to these resources, they are likely to choose a maladaptive coping strategy that will lead to feelings of stress.

It is important to note that feelings of stress and satisfaction are potentially influenced by the passage of time. As a result, sources of stress and satisfaction may vary depending on how close or distant the demand is. For example, an exam or test may be stressful when anticipated, however upon completion it is common to experience feelings of satisfaction. It is also possible these feelings could continue for some time, for example, performing well in an important exam may be a source of satisfaction for many years. The influence of time also raises the question as to the influence feedback has on feelings of stress and satisfaction. For example, is feeling satisfaction around the demand of an exam dependant on receiving a good grade? If so what implications does this have for the relationship between coping strategy, resilience, life satisfaction, and engagement? A more thorough examination is required to assess how the passage of time and result of the demand relates to stress, satisfaction, and the coping process.

The results of the thematic analysis were further analysed by examining differences between sources of stress and satisfaction and scores on the measured variables. Scores for each of the measured variables were compared between participants who did identify a main theme as a source of satisfaction or stress and those who did not identify the same theme. No significant differences were found indicating sources of stress and satisfaction are not influenced by resilience, coping, engagement, and life satisfaction. When applied to the transactional model this finding is consistent with expectations. The transactional model identifies stress or satisfaction as the result of the coping process as opposed to the specific characteristics of the source of stress or satisfaction. The coping process is influenced by a number of factors including, coping strategy, situational factors, and individual differences such as resilience, and impacts on outcomes such as engagement and life satisfaction (Jones & Bright, 2001; Lazarus & Folkman, 1984). Whether an individual sees demand such as an impending deadline as a source of stress or satisfaction will be determined by an interaction between the demand and the coping process. It would be an oversimplification to expect that participants who identify accomplishment for example as a source of satisfaction to have difference resilience levels to those who do not.

The next chapter will examine the implications for both research and practice of the findings and subsequent discussion in this thesis.

CHAPTER EIGHT: CONCLUSION

This thesis has sought to further enhance our understanding in the area of stress and wellbeing by examining the relationships between resilience, coping, engagement, and life satisfaction. In doing so, a number of key findings have emerged.

Firstly, a key point to emerge from this research is the creation of data around how resilience relates to other variables such as coping, engagement, and life satisfaction in a New Zealand sample. Examination and discussion of these relationships has extended the resilience literature and further developed understanding of the complex relationship between resilience and these variables.

Secondly, support was found for a three factor model of coping. The three types of coping were identified as task-focused coping, social support, and maladaptive coping. Subsequent analysis found support for the inclusion of social support as an effective coping strategy distinct from task-focused coping.

Thirdly, this study identified a gap in the literature on how maladaptive coping strategies relate to positive outcomes. A systematic examination of the relationship between maladaptive coping and positive outcomes such as resilience, engagement, and life satisfaction has developed understanding and added to the literature in this area. A number of interesting relationships were highlighted in this analysis such as the lack of relationship between engagement and both maladaptive coping and life satisfaction. Possible explanations for these findings were outlined within Chapter Seven.

Finally, discussion of the thematic analysis identified that a single demand can be behind feelings of both stress and satisfaction. This finding is consistent with the transactional model used in this study and shows support for models of coping that depict the process involved.

Limitations

While this thesis contributes to both knowledge and practice in the area of stress and wellbeing, it is important to acknowledge the limitations of the research.

The student sample used in this study limits the ability to generalise findings to the general population and any application must occur with caution. It must however be noted that while a student sample is less than ideal, there is a small amount of research examining resilience in a New Zealand sample and thus this research is still able to make a unique contribution to the literature. The participants in this study were all completing 300 level papers and as a result were likely to be concluding their studies and entering the workforce in the near future. Additionally, 74% of the sample was currently working in some form of paid employment thus increasing the application of these finding to the workplace.

The number of participants involved in this research could be considered a further limitation. The small sample size may have reduced the likelihood of finding statistical significance in this study. This thesis does however still provide indicative results that can be built upon with a larger scale study.

Implications for Research

The findings and limitations of this thesis have highlighted a number of areas for future exploration and research.

Firstly, while this thesis presents some New Zealand research on resilience it is merely a starting point. There is the need for additional research to build a solid body of knowledge and create clear expectations regarding how resilience as a concept will behave in relation to demographics and other variables. A longitudinal study examining how the relationships behave over time could produce some interesting insights. Additionally, it would be beneficial to examine the relationship between resilience and concrete organisational outcomes such as productivity and profit.

Secondly, the findings of this thesis highlighted the need for future research to examine in depth the relationship between the different coping strategies and how they relate to outcomes and in particular positive outcomes. This thesis can be considered a starting point and has provided some initial data in this area. Further research is required to refine our understanding of coping strategies and outcomes in a variety of samples.

Thirdly, there is scope for additional research to examine the mechanisms behind each coping strategy and how they influence the relationship between coping strategies and outcomes. This thesis produced some interesting findings in relation to coping strategies and outcomes however, little explanation was offered by the literature as to the reasons for these relationships.

Finally, the findings of this thesis around sources of stress and satisfaction highlighted some gaps in the literature that could be the focus of future research. These include the influence the passage of time has on feelings of stress and satisfaction and how feedback and the result of the demand influences feelings of stress and satisfaction. Also of interest would be to examine how these variables in turn influence the relationship between coping strategy and other variables for example, life satisfaction, engagement, and resilience.

Implications for Practice

While the results and discussion of this thesis highlight the need for further research to enhance our understanding a number of practical implications can be identified and applied to the practice of Industrial and Organisational Psychology.

Firstly, the positive relationship resilience has with positive outcomes such as engagement and life satisfaction suggests organisations could increase positive outcomes by increasing resilience levels in their employees. This could occur in the form of a specific resilience training programme. Alternatively, a more subtle campaign could be employed to develop and encourage the characteristics of resilient people. One example could be encouraging the development of social support networks within the organisation in the form of sports teams or interest groups.

Secondly, the proposal within this thesis that engagement with work could serve as the product of both task-focused and avoidance coping provides a warning to organisations. While frequently seen as a positive within organisations, the possibility that engagement with work could act as an avoidance strategy for issues in other parts of one's life must be acknowledged and watched for in employees.

The finding within this thesis that the same demand can be a source of both stress and satisfaction also has a number of implications for practice. If an organisation were to manage the stress of an individual by eliminating all of the stress provoking parts of one's job they would also be removing many of the tasks and duties that provide satisfaction. As a result, effective stress management must address the skills and resources required to do the job and ensure they are available at an appropriate level. By ensuring employees have the skills and resources they need to face the demands and challenges of their job, an employer can not only reduce distress in the workforce, but increase wellbeing while at the same time helping employees gain satisfaction and enjoyment from their job. For the employer, this is a win-win situation that can translate into many positive outcomes for example, decreased absenteeism and increased tenure and productivity.

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APPENDIX

Appendix: Information sheet and survey.

Resilience and Wellbeing

I am Nicola Lees and am currently completing my Master of Arts degree in Industrial /Organizational Psychology at Massey University. For my thesis I am interested in how resilience affects the way people cope with stress.

I would like to invite you to take part in this research. Participation in the study is voluntary and you may decline to answer any question. Completion and return of this questionnaire implies that you consent to take part in the study. Your answers will be anonymous and confidential and you should not put your name anywhere on the questionnaire. All data will be stored securely and destroyed when it is no longer required.

The findings will be written up as part of my Master's thesis and a summary will be made available to you later in the semester. If you have any questions or would like to know more about this research please don't hesitate to contact me. If you would like to take part, please continue to the next page. It will take about 12 minutes to complete.

Thank you very much for your help and support

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This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application 08/004. If you have any concerns about the conduct of this research, please contact Dr Denise Wilson, Chair, Massey University Human Ethics Committee: Northern, telephone 09 414 0800 x 9070, email humanethicsnorth@massey.ac.nz.

What are the two main sources of satisfaction in your study/work?

What are the two main sources of stress in your study/work?

In this survey the word 'work' can mean either work associated with study or with a job. You should choose to answer all questions about the same domain, and this should be the one most relevant or important to you right now or in the recent past.

We are interested in how people respond when they confront difficult or demanding events in their work. There are lots of ways to try to deal with pressure. This questionnaire asks you to indicate what you generally do and feel when you experience pressure. Obviously, different events bring out somewhat different responses, but think about what you usually do when you are under a lot of pressure.

		I usually don't do this at all	I usually do this a little bit	I usually do this an average amount	I usually do this reasonably often	I usually do this a lot
1	I concentrate my efforts on doing something about the situation I am in	1	2	3	4	5
2	I refuse to believe that it has happened	1	2	3	4	5
3	I take action to try and make the situation better	1	2	3	4	5
4	I make jokes about it	1	2	3	4	5
5	I get emotional support from others	1	2	3	4	5
6	I try to see it in a different light, to	1	2	3	4	5

		I usually don't do this at all	I usually do this a little bit	I usually do this an average amount	I usually do this reasonably often	I usually do this a lot
	make it seem more positive					
7	I think about what steps to take	1	2	3	4	5
8	I accept the reality of the fact that it has happened	1	2	3	4	5
9	I learn to live with it	1	2	3	4	5
10	I use alcohol or drugs to help myself get through it	1	2	3	4	5
11	I make fun of the situation	1	2	3	4	5
12	I look for something good in what is happening	1	2	3	4	5
13	I try to come up with a strategy about what to do	1	2	3	4	5
14	I do something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping or shopping	1	2	3	4	5
15	I pray or meditate	1	2	3	4	5
16	I try to deal with it	1	2	3	4	5
17	I get comfort and understanding from someone	1	2	3	4	5

		I usually don't do this at all	I usually do this a little bit	I usually do this an average amount	I usually do this reasonably often	I usually do this a lot
18	I criticise myself	1	2	3	4	5
19	I get help and advice from other people	1	2	3	4	5
20	I turn to work or other activities to take my mind off things	1	2	3	4	5
21	I blame myself for things that happen	1	2	3	4	5
22	I tried to find comfort in my religion or spiritual beliefs	1	2	3	4	5
23	I say to myself "this isn't real"	1	2	3	4	5
24	I tried to get advice or help from other people about what to do	1	2	3	4	5
25	I say things to let my unpleasant feelings escape	1	2	3	4	5
26	I give up the attempt to cope	1	2	3	4	5
27	I use alcohol or other drugs to make myself feel better	1	2	3	4	5
28	I express my negative feelings	1	2	3	4	5

The following statements are about how you feel at work. Please indicate how often you have had each feeling.

		Never	Rarely/ once or less a month	Sometimes / a few times a month	Often / once a week	Always / every day
1	At work, I feel bursting with energy	1	2	3	4	5
2	I am proud of the work that I do	1	2	3	4	5
3	I am enthusiastic about my work	1	2	3	4	5
4	My work inspires me	1	2	3	4	5
5	When I get up in the morning, I feel like going to work	1	2	3	4	5
6	I feel happy when I am working intensely	1	2	3	4	5
7	At work, I feel strong and energetic	1	2	3	4	5
8	I am immersed in my work	1	2	3	4	5
9	I get carried away when I am working	1	2	3	4	5

This set of questions relates to how you have felt over the **Past Month**. Please circle the number that best represents how you have felt.

		Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
1	I felt I was able to adapt to change	1	2	3	4	5
2	I felt I had close and secure relationships at work	1	2	3	4	5
3	I felt I could deal with whatever came	1	2	3	4	5
4	I felt past success gave me confidence for new challenge	1	2	3	4	5
5	I felt I saw the humorous side of things	1	2	3	4	5
6	I felt I coped with pressure	1	2	3	4	5
7	I felt I could bounce back after illness or hardship	1	2	3	4	5
8	I felt things happen for a reason	1	2	3	4	5
9	I felt I put in my best effort no matter what	1	2	3	4	5
10	I felt I could achieve my goals	1	2	3	4	5
11	I felt I did not give up in difficult circumstances	1	2	3	4	5
12	I felt I knew where to turn for help	1	2	3	4	5

		Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
13	I felt I was able to focus and think clearly under pressure	1	2	3	4	5
14	I felt I preferred to take the lead in problem solving	1	2	3	4	5
15	I felt I was not easily discouraged by failure	1	2	3	4	5
16	I felt strong as a person	1	2	3	4	5
17	I felt could handle unpleasant feelings	1	2	3	4	5
18	I felt I had to act on a hunch	1	2	3	4	5
19	I felt a strong sense of purpose	1	2	3	4	5
20	I felt in control of my life	1	2	3	4	5
21	I felt I liked challenges	1	2	3	4	5
22	I felt I worked to attain my goals	1	2	3	4	5
23	I felt I took pride in my achievements	1	2	3	4	5

Below are five statements with which you may agree or disagree. Please indicate the extent to which you agree or disagree with each statement.

		Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree
1	In most ways my life is close to my ideal	1	2	3	4	5
2	The conditions of my life and excellent	1	2	3	4	5
3	I am satisfied with my life	1	2	3	4	5
4	So far I have gotten the important things I want in life	1	2	3	4	5
5	If I could have my life over I would change almost nothing	1	2	3	4	5

Finally, I just need a little more information about yourself:

Have you worked in paid employment anytime in the last 2 years?

❑ Yes ❑ No

Are you currently working in paid employment?

❑ Yes ❑ No

If so, how many hours would you work in paid employment in an average week?

____

Are you a:	❑ Fulltime student		❑ Part-time student		
Gender:	❑ Male	❑ Female			
Age:	❑ >20	❑ 20-29	❑ 30-39	❑ 40-49	❑ 50+

Thank you for your support.

Please return this survey to me at the end of the class or send it to:

Nicola Lees

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