# STRESS INTERVENTIONS: THEIR IMPACT ON PSYCHOLOGICAL WELL-BEING AND WORK ATTITUDES IN AUSTRALIAN UNIVERSITY STAFF

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# TABLE OF ABBREVIATIONS

| | |
|---|---|
| **ARC** | Australian Research Council |
| **AUSS** | Australian University Stress Study |
| **CISM** | Critical Incident Stress Management |
| **COR** | Conservation of Resources |
| **DCS** | Demand Control-Support |
| **EAP** | Employee Assistance Program |
| **ERA** | Excellence in Research for Australia |
| **ERI** | Effort Reward Imbalance |
| **GAS** | General Adaptation Syndrome |
| **HEUS** | Higher Education University Sector |
| **HR** | Human Resources |
| **HSE** | Health Safety Executive |
| **IES** | Intervention Evaluation Survey |
| **JDC** | Job Demand Control |
| **JD-R** | Job Demands-Resources |
| **OH&S** | Occupational Health and Safety |
| **PASW** | Predictive Analytics Software |
| **POS** | Perceived Organisational Support |
| **SPSS** | Statistical Package for the Social Sciences |

# SUMMARY

This project used a combination of quantitative and qualitative data, and cross-sectional and longitudinal analyses to investigate in six studies the relationships between stress interventions and university employees' levels of psychological strain and positive work attitudes.

The first longitudinal study investigated employee awareness of stress-reduction interventions and its relations with well-being and work attitudes using the social-exchange model of perceived organisational support (POS). Results revealed that employees who reported that interventions had been undertaken, scored lower on strain and higher on job satisfaction and commitment than those who did not perceive the measures. The study further revealed that employees' trust in senior management and perceived procedural justice mediated the relationship between POS and well-being and organisational commitment and job satisfaction.

Study 2 explored the role of staff group and tenure in relation to POS and employee attitudes. The results showed that POS predicted organisational commitment, and procedural justice for non-academic staff only. There were also differences in groups with different lengths of tenure: employees with intermediate levels of tenure held more positive perceptions of their university than those with either five or fewer years of tenure or those with over 20 years of tenure.

Study 3 investigated the predictors of procedural justice and found that job satisfaction was the strongest predictor of perceived justice for university employees: the more satisfied employees were with their jobs, the higher their perceptions of procedural justice.

Study 4, investigated the HR stress intervention strategies that were implemented by management in five universities to identify what types of strategies were implemented to reduce strain and increase positive work-related attitudes.

Results showed that leadership development strategies were the key intervention targets across the universities. Cross-sectional data from 4603 participants at two time points showed that employee levels of organisational commitment and/or trust in senior management were higher at four of these universities in 2003, and employee perceptions of procedural justice were higher at all the universities in 2003.

Study 5 focused specifically on employee-level perceptions of effective stress reduction strategies at the abovementioned universities. Interpersonal relationships and support from supervisors and colleagues at work were reported most frequently by employees as a source of reduced stress. Other dominant themes of effective strategies were changes in job or work role; the use of specific stress-reduction and/or management intervention strategies; personal resources in terms of coping strategies or attitudes; and increases in staff numbers and/or resources.

Study 6 reported on a cross-sectional study of employees at 13 universities to determine whether the types of strategies identified in Study 5 were generalisable to the broader university sample. Qualitative evidence reported similar themes to Study 5, and showed that supportive interpersonal relationships, particularly between employees and their Head of Department appear to be a salient feature for university employees in terms of reducing their level of stress.

The studies support the importance of employee perceptions of organisational support, and the role of stress intervention strategies in enhancing the well-being and work attitudes of employees in the university sector in Australia.

# STATEMENT OF AUTHORSHIP

I declare that this thesis presents work carried out by myself and does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; to the best of my knowledge it does not contain any materials previously published or written by another person except where due reference is made in the text; and all substantive contributions by others to the work presented, including jointly authored publications, is clearly acknowledged.

I give my consent to this copy of my thesis, when deposited in the university Library, being made available for loan and photocopying.

Signed ..... August 2011

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# DEDICATION

This thesis is dedicated in loving memory to my brother, Ronald Laurencis

(1965 – 1999).

# Chapter 1:
# Project Aims – Stress Intervention Research

## 1.1 Overview

This introductory chapter provides a brief discussion of stress management interventions, examines evaluative research on interventions, and reports on work stress in the Australian Higher Education Sector, which provides the context of this thesis. The chapter also details the key purpose and specific aims of this research project, and presents the structure of the thesis.

## 1.2 Stress Intervention Research

A stress management intervention has been defined as "any activity, program, or opportunity initiated by an organisation, which focuses on reducing the presence of work-related stressors or on assisting individuals to minimise the negative outcomes of exposure to these stressors" (Ivancevich, Matteson, Freedman, & Phillips, 1990, p. 252). Despite the wide variety of programs to manage stress and improve employee well-being and morale, few evaluative studies of stress interventions have been documented in the literature (Caulfield, Chang, Dollard, & Elshaug, 2004; Cooper, 2001). This is primarily due to the methodological and conceptual difficulties inherent in stress-intervention research, and these will be discussed in Chapter 3. Indeed, a review of intervention studies conducted on Australian samples within the last decade found only six interventions (Caulfield et al., 2004). Accordingly, there have been calls for researchers to address the fundamental questions of what interventions work, when are they effective, and "why should and how could organisational level stress interventions work?" (Briner & Reynolds, 1999, p. 648).

## 1.3 Effective Interventions

Of the few evaluative studies, research has found that the success of a stress prevention program depends on combining a *bottom-up* participative approach with a *top-down* approach that is supported by senior management (Kompier & Cooper, 1999). However, the difficulty in implementing successful organisational interventions is that they require co-operation and participation from employees, unions and management (Nytrø, Saksvik, Mikkelsen, Bohle, & Quinlan, 2000), who may be in conflict. Moreover, factors such as organisational structure, size, resources, culture and values determine the appropriateness of interventions (Marshall & Cooper, 1981), and both the strategy and process of implementing an intervention may be as important as its content in achieving an effective outcome (Giga, Noblet, Faragher, & Cooper, 2003; Nielsen, Randall, & Albertsen, 2007). Indeed, organisational stress-reduction interventions often have little or no effect, or may produce mixed effects, as their impact depends on various organisational characteristics that may be difficult to identify or control. As a result, Briner and Reynolds (1999, p. 659) urge researchers to examine a potential link "between changes in objective job conditions, changes in subjective perceptions of those job conditions and changes in employee wellbeing". In line with the view within positive psychology, and in accordance with Seligman and Csikszentmihalyi (2000), this thesis considers well-being as more than the absence of illness.

By presenting a three-phase framework for understanding the process of intervention research in occupational safety and health, Goldenhar, LaMontagne, Katz, Heaney, and Landsbergis (2001) argue that research should evaluate the development, implementation, and effectiveness stages of the intervention. These stages will be defined in greater detail in Chapter 3. In order to assess an effective stress intervention, existing empirical research implies that: (1) the development of interventions should include a participatory approach, and involve and be supported by employees, union members and senior management (Nytrø et al., 2000); (2) interventions should detail the process involved in implementing the interventions, which can play an important role in their success or failure; (3) the implementation of interventions should incorporate multi-level approaches that combine individual- and organisation-directed stress management and reduction strategies (Giga, Cooper, & Faragher, 2003); (4) interventions should have clearly defined assessment and/or

monitoring policies; and (5) evaluations should use multiple self-report and objective measures (Briner & Reynolds, 1999).

There are also difficulties in evaluating organisational interventions, as the few published studies reporting successful interventions are often methodologically unsound and lack systematic approaches in the research (Newman & Beehr, 1979). Indeed, Newman and Beehr (p. 39) assert that there is a particular need to consider "the role that individual and situational differences (especially the passage of time) play in determining the effectiveness of stress management strategies". Consequently, Zapf, Dormann, and Frese (1996) suggest the use of longitudinal designs that examine reverse or reciprocal causal hypotheses and consider third variables to assist in clarifying job stress mechanisms. In addition, Dollard (1997) asserts that a combination of quantitative and qualitative data, and cross-sectional and longitudinal analyses, may assist researchers to appreciate fully the nature of the work-stress process.

To address a pressing call from industry and stress prevention practitioners for the content and the process of stress prevention to be reported and evaluated as part of any intervention strategy, the aim of this thesis therefore is to address some of these conceptual and methodological difficulties and to add to the national and international literature on intervention theory as it relates to the prevention and reduction of psychosocial risks in the university sector in Australia.

## 1.4 The University Sector in Australia

The need for an examination of the Australian Higher Education Sector is highlighted in a recent discussion paper, in which Bradley, Noonan, Nugent, and Scales, (2008b, p.12) note that:

> In the public universities, resources have been under increasing pressure for some time as student numbers have outstripped Commonwealth funding for teaching. Student-staff ratios have grown markedly, from 12.9 in 1990 to 20.3 in 2005 (Universities Australia 2007a).

The adverse impact of economic and management imperatives on the health and well-being of staff in the university sector in Australia has been demonstrated in recent research that has shown that work-related stress in Australian universities has risen due to increased work pressures and reduced government financial support (Dua,

1994; Gillespie, Walsh, Winefield, Dua, & Stough, 2001; Winefield, A., Boyd, Saebel, & Pignata, 2008; Winefield, Gillespie, Stough, Dua, & Hapuarachchi, 2002; Winefield et al., 2003; Winefield, T., Boyd, Saebel, & Pignata, 2008; Winefield & Jarrett, 2001). Despite national and international evidence of high levels of strain in the higher education system, a comprehensive review of quality intervention evaluation studies found that only one of 74 studies was conducted in the university sector (Jordan et al., 2003). Consequently, research is needed to identify the kinds of strategies implemented by university management, particularly human resource (HR) departments, in order to determine their focus, and to assess the impact that these strategies have had on employees' job demands and resources, and the key outcome measures of employee well-being and positive work attitudes.

Job demands are defined as the degree to which the working environment contains stimuli that require attention and effort (Jones & Fletcher, 1996). On the other hand, job resources refer to those physical, psychological, social, or organisational aspects of the job that may reduce job demands, and/or assist in achieving work goals, and/or stimulate personal growth, learning and development (Schaufeli & Bakker, 2004). The decreasing resources and increasing demands that appear to be associated with the current university context makes this population particularly appropriate for this investigation.

In line with the growing body of literature on positive psychology, this research will focus on interventions incorporating employee well-being and morale building activities, and their potential to reduce strain in the university sector. By using a combination of quantitative and qualitative research, this project is designed to continue previous Australian research which has examined occupational stress in Australian universities (the Australian University Stress Survey [AUSS]) (see Gillespie et al., 2001; Winefield, A., et al., 2008; Winefield, T., et al., 2008; Winefield et al., 2002; Winefield et al., 2003). An important aspect of the present study is the availability of the rich AUSS database, comprising both cross-sectional data and two-wave longitudinal data that may provide evidence of any within-subjects changes in work stress that occurred between the two waves of the survey.

## 1.5 Purpose of This Thesis

The key purpose of this thesis is to examine the relationship between objective intervention measures implemented by management, employee perceptions of those intervention measures and employee well-being and positive work-related attitudes. The attitudinal outcomes that will be investigated include employee self-reports of psychological strain as this has frequently been investigated as an outcome variable in work stress research (Mansell, Brough, & Cole, 2006). This thesis also examines employees' reports of job satisfaction, affective organisational commitment, trust in senior management, and employee perceptions of procedural justice, as research has found that these outcomes are of particular importance to university staff (Abouserie, 1996; Dua, 1994; Gillespie et al., 2001; Hartman, Yrle, & Galle, 1999; Taris, Schreurs, & van Iersel-van Silfhout, 2001; Winefield & Jarrett, 2001). Perceptions of procedural justice, in particular, will be explored in depth in the present thesis as this attitudinal measure appears to have been a specific target for intervention strategies within the university context, perhaps because Winefield et al. (2002) recommended specifically, that the universities review the fairness of promotion, redundancy and performance appraisal procedures in order to increase the low levels of perceived procedural justice reported by employees in the AUSS Time 1 survey.

The effective management of occupational stress is important to HR practitioners who are concerned with ensuring that HR practices promote employee well-being and positive work-related attitudes (Quick, Macik-Frey, & Cooper, 2007). In order to evaluate the effects of the HR interventions implemented at universities, and identify what kinds of interventions worked, this study uses a data triangulation methodology to blend and integrate a variety of data and methods to examine stress interventions from multiple perspectives. The triangulation methodology aims to "...capture a more complete, *holistic*, and contextual portrayal of the unit(s) under study" and may also "...enrich our understanding by allowing for new or deeper dimensions to emerge" (Jick, 1979, pp. 603-604). In this thesis, triangulation involved accessing both quantitative and qualitative data from AUSS self-report questionnaires, and collecting additional qualitative data via electronic surveys of university HR professionals. The responses from senior university management provided independent evidence of the intervention measures implemented, as well as the target and extent of those interventions.

Determining the relationship between psychosocial factors (i.e., any organisational factors and interpersonal relationships in the work setting that may affect the health of workers) and specific organisational outcomes can assist management to determine where to focus an intervention and where to measure its effects (Carr, Schmidt, Ford, & DeShon, 2003). To determine the level at which those interventions are focused, the intervention strategies that are examined in the present research are categorised as individual (person-directed), organisation (work-directed), and individual/organisation interface (person/work interface-directed) interventions in accordance with the DeFrank and Cooper (1987) classification of occupational stress management programs (see Chapter 3 for a definition of these terms). This classification approach will enhance the understanding of work stress mechanisms and the application of interventions in university workplaces.

In addition, this thesis examines the construct of perceived organisational support (POS) within the social exchange theoretical framework (Blau, 1964) in order to assess employee perceptions of the HR management practices designed to reduce or manage stress at work. The social-exchange model of POS refers to the general belief among employees about the extent to which an organisation's management values their contributions, considers their well-being, cares about their goals and values, treats them fairly, enriches their jobs or working environments (Eisenberger, Huntington, Hutchinson, & Sowa, 1986), and assists them to perform their work effectively (Rhoades & Eisenberger, 2002). Consequently, high levels of POS produce an obligation for employees to care about the organisation's welfare and to increase their efforts to help the organisation succeed (Eisenberger, Jones, Aselage, & Sucharski, 2004; Rhoades & Eisenberger, 2002).

POS assures employees that help will be available from the organisation when they need it to carry out their job effectively and to deal with stressful situations (Rhoades & Eisenberger, 2002). Support for the positive benefits of POS was shown by Pignata and Winefield (2006) who found a link between employees who perceived that stress-reduction measures had been implemented at their university and higher levels of positive work-related attitudes (i.e., job satisfaction, procedural justice, organisational commitment and trust in senior management). Given that a growing body of empirical evidence supports a positive relationship between supportive

organisational practices and POS, this thesis examined employee awareness of stress intervention strategies as a potential indicator of POS.

This thesis answers a call for the content of stress-reduction strategies to be reported and evaluated by examining the effectiveness of stress intervention strategies implemented at Australian universities within the theoretical framework of the Job Demands-Resources (JD-R) model of work stress (see Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). This increasingly accepted model provides a contextual framework and theory to explain and describe how key psychosocial characteristics of the workplace (demands, and resources) and their combinations predict morale and distress (the health impairment process) on the one hand, and motivation and performance (the motivation process) on the other. POS will be considered as a job resource in the context of the JD-R model, and will be defined in greater detail in Chapter 5. An adaptation of the model that informs this thesis is illustrated in Chapter 2.

## 1.6 Specific Aims

As the key purpose of this thesis was to examine the relationship between objective intervention measures implemented by management, employee perceptions of those intervention measures and employee well-being and positive work-related attitudes, the seven specific aims of this research are summarised as follows:

1) To provide an insight into the effectiveness of stress-reduction interventions from an employee's perspective by examining a potential link between employees' perceptions of changes in objective job conditions, and changes in employee health and work attitudes. This thesis conceptualises positive employee perceptions of interventions as an aspect of POS. It was predicted that employees' perceptions of organisational support in implementing stress interventions would be associated with lower levels of psychological strain; and positively related to job satisfaction and affective commitment to the organisation.

2) To examine potential differences resulting from occupational staff group (i.e., academic and non-academic staff) and length of tenure in the relationships between POS (conceptualised as positive employee perceptions of

interventions) and job satisfaction, organisational commitment, trust in senior management and perceived procedural justice. This thesis investigates whether (1) staff group or (2) length of tenure affects the relation between POS and positive attitudinal outcomes.

3) To examine the ethical concept of procedural justice which is related to the psychological contract between employee-employer, and establish the key predictors of perceived procedural justice in the university context. Further, to investigate whether the predictors differ for academic and non-academic staff.

4) To examine the mediating influence of trust in senior management and perceived procedural justice in relationships between POS and affective commitment to the organisation and job satisfaction. It was predicted that employees' perceptions of: (1) trust in senior management and (2) procedural justice would mediate: the positive relationship between POS and affective organisational commitment and job satisfaction; and the negative relationship between POS and psychological strain.

5) To present a qualitative multi-case study of five universities to investigate the HR stress management or reduction practices that were undertaken by university management to reduce employee stress and increase employee well-being in order to relate them to the observed changes in staff attitudes and well-being within each university. Thus, this study determines: (1) the types of HR interventions and strategies that were implemented by the universities to reduce employee-levels of psychological strain and increase positive work-related attitudes; (2) the types of individual-directed, organisation-directed, and individual/organisation interface-directed interventions that were implemented; and (3) the key intervention strategy that was implemented by each university. Further, the study examines the following research questions: (1) Were there any changes in employee-levels of psychological strain, and positive work-related attitudes? and (2) What types of intervention strategies were effective in lowering psychological strain, and heightening positive work-related attitudes?

6) To employ a qualitative design to focus on employees' perceptions of the stress reduction and/or management strategies that were effective in reducing stress at the five aforementioned universities. The study investigates the following research questions: (1) What types of intervention strategies did employees at five universities perceive to be effective in reducing stress? and (2) Is there a relationship between employees' perceptions of effective stress-reduction strategies and the HR intervention strategies that were implemented by management (and documented in the multi-case study)?

7) To employ a broader cross-sectional study to determine the types of stress-reduction strategies that employees perceived to be effective in reducing psychological strain, and increasing positive work attitudes. Examining responses from employees at 13 universities will determine whether the types of stress-reduction strategies identified in the previous study are generalisable to the broader university sample.

## 1.7 Structure of This Thesis

In order to address each of these issues, this thesis herein is divided into 11 Chapters. Chapters 2, 3, 4 and 5 contain a detailed review of the existing research literature relating to stress, stress-interventions, the university context, and employee well-being and work attitudes. Chapter 2 provides a brief discussion of the nature of stress, including a definition of occupational stress, a description of the human, societal and organisational cost of occupational stress, and a discussion of work stress theories. An adaptation of the JD-R model (illustrated in Figure 2.1) provides the theoretical framework for this thesis. Chapter 3 provides a discussion of the work stress intervention literature, including the conceptualisation, development, implementation and evaluation of interventions. The following chapter presents the context of the present thesis and describes the working conditions within the Australian university sector, with a specific focus on the results of the AUSS as this study provides the background for the thesis. Chapter 5 contains a summary of the research literature regarding perceived organisational support, psychological strain, and the positive work attitudes of job satisfaction, affective organisational commitment, trust in senior management and perceived procedural justice. This

material formed the background for the longitudinal studies described in Chapters 6, 7, and 8.

Chapter 6 reports the results of a longitudinal study of 869 academic and non-academic staff from 13 universities across Australia. The purpose of the study was to examine employee views of intervention measures being implemented at their university and the resulting employee-level consequences of psychological strain and the key work-related attitudes of job satisfaction, affective organisational commitment, trust in senior management, and perceptions of procedural justice. In this study, positive views of intervention measures were conceptualised as employee perceptions of organisational support. This chapter also examined the mediating role of trust in senior management and perceptions of procedural justice in linking perceived organisational support with psychological strain and the work attitudes of job satisfaction and affective organisational commitment. Chapter 7 reports on the role of two specific variables: staff group (academic or non-academic) and length of tenure, both of which were found in Chapter 6 to be predictors of morale (i.e., job satisfaction, affective commitment to the organisation). Finally, Chapter 8 examines the key predictors of perceived procedural justice in university staff, and discusses the concept of the psychological contract between an employee and employer.

The next three Chapters 9, 10, and 11 are qualitative studies of intervention strategies. The first of these studies, described in Chapter 9, documents the HR management practices that were implemented in five universities designed to reduce or manage stress, and examines the relationship between these objective intervention measures implemented by management, and employee well-being and positive work-related attitudes. Chapter 10 focuses specifically on employee-level perceptions of effective stress reduction strategies at the five abovementioned universities. This research is extended in Chapter 11 by a cross-sectional study of 13 universities that examined employee reports of the stress reduction strategies that they perceived to reduce their levels of occupational stress. The final chapter in this thesis (Chapter 12), integrates and discusses the results of all six quantitative and qualitative studies in order to consider the implications of these findings for assisting management policy and the health and well-being of employees in the higher education university sector in Australia.

The thesis herein presents three key papers (see Chapters 6, 9, and 11), and three supplementary chapters (Chapters 7, 8 and 10) each reporting on data collected between 2000 and 2007 examining interventions to improve employee well-being in Australian universities, as well as levels of occupational stress and work-related outcomes. Each of the three papers was in submission at the time of writing the thesis. As stated above, the research papers are preceded by five introductory chapters presenting relevant background literature, and the final chapter summarises the overall results of the project findings as a whole.

# Chapter 2:
# The Nature of Stress

## 2.1 Overview

This chapter provides a brief discussion of the nature of stress, the dominant physiological and psychological models of stress, a definition of work-related stress, and the human, societal and organisational costs of occupational stress. In order to appreciate fully the nature of the work-stress process and to gain an insight into the relationship between psychosocial risk factors and occupational stress and well-being, this chapter presents a discussion of four prominent work stress theories, and the theoretical framework for this thesis.

## 2.2 The Nature of Stress

Although the definitions of stress are various, it is generally agreed that it is a complex and dynamic process (Lazarus, 1990). As a concept, it is composed of the stress stimuli (i.e., episodic stressors such as daily hassles, or chronic stressors) that disrupt the equilibrium of the autonomic nervous and endocrine systems in order to prepare an individual to fight or flee the stressor (Cannon, 1914), the processing systems which include the subjective experience of stress; and the stress response of increased alertness, muscle tension, heart rate, blood pressure and breathing in response to the experience of traumatic events, conflicts and environmental demands (Levine & Ursin, 1991). This response may be detrimental to an individual's health when it is activated too frequently, intensely, or is prolonged (Cannon, 1914), as it impairs the immune system's functioning and increases the likelihood and severity of adverse physiological conditions e.g., hypertension, peptic ulcer and diabetes (Cobb & Rose, 1973), and adverse effects on an individual's psychological well-being (Herbert & Cohen, 1993).

In extending the work of Cannon (1914), Selye (1936) proposed the General Adaptation Syndrome (GAS) theory of the physiological consequences of chronic exposure to severe stressors. The GAS involves a sequence of three physiological stages. The first stage is the *alarm stage* that involves arousal of the autonomic nervous system and occurs when the organism is first confronted with a stressor. This stage is similar to the fight or flight response. With continued exposure to the stressor, the organism enters the *resistance stage* as the organism adapts to the stress event by utilising physiological and psychological resources to maintain homeostasis. With continued exposure to the stressor, the *stage of exhaustion* occurs if the physiological resources are depleted in attempting to manage the stress event. However, the GAS, and physiological definitions of stress in general, do not recognise the role of psychological factors in stress (Taylor, 1995). Given individual differences in the subjective experience of potentially stressful events, and the resulting physiological and psychological responses, it is important to consider the role of psychological factors in the stress process.

## 2.3 Cognitive Appraisal Theory

The dominant psychological model of stress is the transactional model (Lazarus & Folkman, 1984), which regards stress as the imbalance between an individual's perceived environmental demands and their perceived ability to cope with those demands (Cox, 1978; McGrath, 1970). Lazarus and Folkman posit that an individual cognitively appraises an event in terms of its consequences and potential for harm or challenge and then appraises whether their available resources can cope with the demands of the stressor. Hence, the extent of stress that an individual feels is determined by the imbalance between the two appraisals, as an individual who feels that they have sufficient resources to deal with the demands or stressors confronting them may feel little stress, whereas those who feel that they do not have the resources to cope, will feel a higher degree of stress. As the subjective experience of stress may differ between individuals, due to differences in their personality or coping style (Mikkelsen, Saksvik, Eriksen, & Ursin, 1999), it is also important to identify the potential role that other factors (i.e., psychosocial factors at home, or aspects at work, or an interaction of both) play in the occupational stress process**.**

## 2.4 Occupational Stress

Occupational stress is a multi-faceted problem that has increased in recent decades as the nature of work has shifted from physical demands to psychological and emotional demands (Cooper, 1998). This rise has been linked to the worldwide interconnectedness inherent in globalisation, economic rationalism, the impact of information technology and the worldwide technological and competitive trends affecting organisational structure and demands in modern economies (Niedhammer, Tek, Starke, & Siegrist, 2004; Ostry, Kelly, Demers, Mustard, & Hertzman, 2003).

Work-related stress is defined as "the adverse reaction people have to excessive pressure or other types of demand placed on them" (Health Safety Executive [HSE], 2007, p. 7). When job demands are too high for individuals to cope with, stress reactions are likely to occur (Schaufeli & Enzmann, 1998). As it is a state characterised by high levels of arousal and distress, and often by feeling unable to cope, stress can manifest as psychological, physiological and/or behavioural symptoms. Psychological symptoms include anxiety and depressive disorders, burnout (Cooper & Quick, 1999; van der Doef & Maes, 1999), emotional exhaustion, impaired memory and executive function, and decreased attention and concentration. The physiological symptoms of stress can lead to various disorders or diseases including ischaemic heart disease, cardiovascular diseases and their symptoms (Kivimäki et al., 2002), stroke, cancer, musculoskeletal and gastrointestinal disease, hypertension (Cooper & Quick, 1999), gastrointestinal disorders, and chronic fatigue (Sarason, Johnson, & Siegel, 1978). The behavioural symptoms include sleeping problems and insomnia (Cooper & Quick, 1999), and high risk patterns of alcohol consumption (Burke & Mikkelsen, 2006; Demerouti, Bakker, Nachreiner, & Ebbinghaus, 2002; Dollard & Winefield, 2001), violence (Cooper & Quick, 1999), and deteriorated interpersonal relationships (Dollard, Winefield, & Winefield, 2001; Jellis, 1996).

## 2.5 Cost of Occupational Stress

In addition to the human cost, work-related stress has inherent organisational and societal costs. The HSE (2007, p.7) in the United Kingdom report that:

> work-related stress has adverse effects for organisations in terms of staff performance and productivity; accidents caused by human error; staff turnover

> and intention to leave; attendance levels; staff recruitment and retention; customer satisfaction; organisational image and reputation; and potential litigation.

High levels of unmanaged stress are linked to high retraining costs, interpersonal conflict, poor morale, and increased worker's compensation payments (Cooper & Cartwright, 1994). For example, work-related stress claims in all Australian jurisdictions are the most costly and complex form of workers compensation claim due to the lengthy duration of absence and the complicated medical care (Guthrie, Ciccarelli, & Babic, 2010).

According to the latest figures for compensation payments made in Australia in 2007-08, the median compensation payment for the 6290 serious claims (i.e., accepted workers compensation claims involving a fatality, permanent incapacity or temporary incapacity with one or more working weeks from work, excluding journey claims) lodged for mental stress was $16,300. The next highest median payment was $11,000 for claims for sound and pressure injuries or diseases (Safe Work Australia, 2010). In relation to compensation payments for mental stress claims in the Education Industry in 2007-08, the most costly claims were those in higher education where the median payment for the 70 serious claims made was $33,200. The next highest median compensation payment was $18,600 for the serious mental stress claims made in the combined primary and secondary education industry (Safe Work Australia, 2010).

The high cost of compensation payments for mental stress in the higher education industry in particular, highlights the crucial need to identify the psychosocial risk factors and risk groups, in order to prevent or reduce occupational stress and its adverse effects on mental and physical health. In order to appreciate fully the nature of the work-stress process, and gain an insight into the relationship between psychosocial risk factors and occupational stress and well-being, it is necessary to examine them within the framework of work-stress models.

## 2.6 Work-Stress Theories

The link between work characteristics and stress are considered within the psycho-sociological frameworks of work stress theories. Four prominent theoretical models to be discussed in this chapter are: (1) the Job Demand-Control model (JDC;

Karasek, 1979); (2) the Demand-Control-Support model (DCS; Johnson & Hall, 1988; Karasek & Theorell, 1990); (3) the Effort-Reward Imbalance (ERI) model (Siegrist, 1996; Siegrist, 2002; van der Doef & Maes, 1999); and (4) the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2007; Bakker, Demerouti, & Euwema, 2005; Demerouti et al., 2001). The JDC and DCS models propose that jobs that are both highly demanding and low in control and/or support will be highly stressful and are likely to lead to strain and burnout, whereas the ERI model proposes that work strain is a consequence of an imbalance between effort and reward (e.g., salary, career advancement). A recently developed model that encompasses the DCS and ERI models, as well as others that have been proposed in the literature (i.e., Hobfoll's (1989) Conservation of Resources (COR) model), is the JD-R model. These four theoretical models will now be examined.

### *2.6.1 The Job Demand Control (JDC) Model*

The central constructs in Kasarek's Job Demand-Control model (JDC; Karasek, 1979) are psychological demands, and control (decision latitude). According to this model, mental and physiological strain occurs at work when high psychological demands are accompanied by low decision latitude. Psychological demands refer to the quantity of work, intellectual requirements, time pressures, work pace and role conflicts (Karasek, 1979). Aspects of work that cause an increase in psychological demands include an excessive amount of work, work with high mental demands, intense concentration for long periods, conflicting demands, frequent interruptions, and not enough time to get the work done (Karasek, 1979; Karasek & Theorell, 1990).

Control is operationalised as the combination of a worker's authority to make decisions at work and the use and development of the various skills used by a worker (i.e., skill discretion) (Ganster & Schaubroeck, 1991). Control or autonomy also refers to participation in decision-making (Karasek et al., 1998). Research has shown that worker participation in a review of work to improve decision latitude helps improve mental health and productivity and reduces absenteeism (Bond & Bunce, 2001). An extensive review of empirical research by van der Doef and Maes (1999) shows support for the additive (main) effects of demands and control, but not for the multiplicative (interaction) effects that are central to the theory.

Karasek's model (1979) has been challenged for failing to account for individual differences, and for not considering the effect of management practices and organisational climate in the relationship between demands-control and employee well-being (Cotton, 2002).

### *2.6.2 The Job-Demand-Control-Support (DCS) Model*

The JDC model was extended to include a social dimension of support, and termed the Job-Demand-Control-Support (DCS) model (Johnson & Hall, 1988). The model proposes that the interaction of three dimensions of work characteristics in job demands, job control (job decision latitude) and workplace social support predicts employee health and well-being. The DCS model posits that individuals with jobs combining high demands, low control, and low support from supervisors or colleagues have the highest risk of stress (Karasek, 1979). This combination is labelled 'iso-strain' (isolation-strain), as social support may buffer psychological strain depending on the degree of support (van Veldhoven, Taris, de Jonge, & Broersen, 2005). The model proposes that the social support of colleagues and superiors (Johnson & Hall, 1988) may modify the association between job strain and the emergence of health problems by acting as an antidote or protective factor. In the DCS model, social support includes instrumental support (i.e., additional resources or assistance in performing your work) and emotional support or socio-psychological esteem, on the one hand, and a low level of hostility and conflict, on the other.

The premise of the theory is that a person's ability to deal with strain (resulting from high demands combined with low latitude) is better when the person has good social support at work (Johnson & Hall, 1988; Johnson, Hall, & Theorell, 1989). This premise has been supported by studies on cardiovascular disease which show the importance of social support as a moderator of cardiovascular risks (Fuhrer, Stansfeld, Chemali, & Shipley, 1999). In their review of the strain and buffer hypotheses, van der Doef and Maes (1998) found that working in a high (iso) strain job appears to be associated with an elevated risk for cardiovascular disease and increased (psycho)somatic complaints.

However, a criticism of the DCS model relates to the simplicity of the model's interaction hypothesis, in that one work characteristic can negate the effect of another (van Veldhoven et al., 2005). For example, as workers will respond differently to the

same constellation of control and demand conditions, Ostry et al. (2003) assert that a measure of individual differences, such as coping style, should be included in any work stress model. Nevertheless, Karasek and Theorell (1990) assert that the theoretical concept of the DCS model should be applied in interventions to provide long-term improvement in employee health, well-being and organisational productivity.

### *2.6.3 The Effort Reward Imbalance (ERI) Model*

A complementary model to Karasek's two models is based on the relationship between effort made at work and the reward obtained. The ERI model developed by Siegrist (1996) proposes that work strain is a consequence of an imbalance between effort and reward. Siegrist (1996) defines effort as job demands and/or obligations that are imposed on the employee. The premise of the model is that effort at work is reciprocated by adequate reward as part of a social contract. The dimensions of reward are: (1) the socio-emotional dimension is associated with the approval and esteem received at work; (2) the occupational status dimension is associated with promotion prospects and job security; and (3) the monetary dimension. The balance lies in receiving the benefits that should be expected given the contribution at work.

As a result, work situations that demand high effort and offer little gain could have adverse effects on physical and emotional health due to the imbalance between effort and reward (Marmot, Theorell, & Siegrist, 2002; Siegrist, Peter, Junge, Cremer, & Seidel, 1990). In support of the model, research has found that a state of inequity between effort and reward at work may enhance the activation of the autonomic nervous system thereby influencing the risk of coronary heart disease (Siegrist, 1998), depression (Pikhart et al., 2004) and alcohol dependence (Siegrist et al., 2004; Siegrist & Peter, 1994).

According to Siegrist (1998), there are two different sources of high effort at work: an extrinsic source which refers to the demands of the job; and an instrinsic source which motivates an employee in a demanding situation. The ERI model has been applied successfully in the current competitive labour market due to its focus on rewards and its distinction between the intrinsic efforts that motivate an employee, and the extrinsic efforts in workload demands (Tsutsumi & Kawakami, 2004). Indeed, a review of 45 studies by van Vegchel, de Jonge, Bosma, and Schaufeli

(2005) found considerable empirical support for the ERI hypothesis. The model also proposes the intrinsic personality characteristic of overcommitment, which is defined as an individual's pattern of coping with job demands (Tsutsumi & Kawakami, 2004) and is similar to the competitive and time urgent traits of the Type A behaviour pattern. Research suggests that individuals high in overcommitment will find an imbalance between their effort and reward particularly stressful (de Jonge, Bosma, Peter, & Siegrist, 2000).

As the abovementioned theories focus on specific psychosocial work characteristics (e.g., control, support, imbalance or unfairness), it has been suggested that, when considered on its own, each ignores important features of the work environment that can contribute to job strain. The JD-R model (Bakker & Demerouti, 2007; Demerouti et al., 2001) encompasses both the DCS and ERI models, as well as the COR theoretical model (Hobfoll, 1989). The premise of the COR model is that individuals strive to obtain, build, and protect their resources (i.e., objects, personal characteristics, social conditions, energy) and psychological stress occurs when their resources are lost, threatened with loss, or if individuals fail to replenish resources after a significant investment. The dual-process JD-R model provides a contextual framework and theory to explain and describe how two key psychosocial factors (job demands, job resources) and their combinations, predict morale and distress on the one hand and motivation and performance on the other.

### *2.6.4 The Job Demand Resources (JD-R) Model*

The two-factor JD-R model (Bakker & Demerouti, 2007; Bakker et al., 2005; Bakker, Demerouti, & Schaufeli, 2003; Demerouti et al., 2001) proposes that employee well-being is related to a range of workplace variables that are conceptualised in the two general categories of job demands or job resources. Job demands are "those physical, psychological, social, or organisational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills and are associated with certain physiological and/or psychological costs" (Bakker & Demerouti, 2007, p. 312).

Job demands may become stressors when meeting them requires considerable effort, as high demands exhaust employees' mental and physical resources and lead to the depletion of energy and to health problems (the health impairment pathway:

Bakker & Demerouti, 2007). The demanding aspects of an employee's job (i.e., high work pressure, unfavourable physical environment) may lead to constant overtaxing and eventually to exhaustion that may have adverse organisational consequences (e.g., absenteeism: Bakker, Demerouti, de Boer, & Schaufeli, 2003).

Conversely, job resources are the physical, psychological, social, or organisational aspects of the job that may reduce job demands and the associated physiological and psychological costs, aid in achieving work goals, and/or stimulate personal growth, learning and development (the motivational pathway) (Bakker & Demerouti, 2007; Demerouti et al., 2001; Schaufeli & Bakker, 2004). These resources are posited to lead to work engagement that can lead to positive outcomes such as extra-role performance (Bakker, Demerouti, & Verbeke, 2004). Schaufeli and Bakker (2003, p. 4) define work engagement as:

> a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption. Rather than a momentary and specific state, engagement refers to a more persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual, or behavior.

Job resources can be located at the organisational level (i.e., pay, career opportunities, job security), interpersonal and social relations level (i.e., supervisor and co-worker support, team climate), the level of work organisation (i.e., role clarity, participation in decision making), and at the task level (e.g., skill variety, performance feedback) (Bakker and Demerouti, 2007). Hence, the model explains how the job demands and job resources inherent in employees' working conditions influence negative aspects of employee well-being (i.e., exhaustion, psychosomatic complaints) and positive aspects of well-being (i.e., dedication, organisational commitment) through these dual independent psychological processes (Bakker, Demerouti, & Schaufeli, 2003; Llorens, Bakker, Schaufeli, & Salanova, 2006). As the model does not specify particular factors, the flexibility and breadth of the model allows a choice of work-related factors to be classified as demands or resources.

The JD-R model has received empirical support for the primary relationships between job demands and health impairment (the de-energising hypothesis), in the study of burnout in hospital nurses (Demerouti, Bakker, Nachreiner, & Schaufeli, 2000), call centre workers (Lewig & Dollard, 2003), and homecare workers (Bakker, Demerouti, Taris, Schaufeli, & Schreurs, 2003) and between job resources and

motivational outcomes (the motivational hypothesis) in its application to various occupational groups (i.e., teachers, white and blue collar workers) regardless of their particular job demands and resources. Hence, irrespective of the type of occupation, the JD-R model proposes that when job demands are high but resources are low, distress and withdrawal from work are more likely to occur (Bakker, Demerouti, & Schaufeli, 2003).

Job resources may buffer the relationship between job demands and stress reactions (e.g., exhaustion) as employees who have high levels of resources available are more capable of dealing with demanding work conditions and consequently experience lower levels of exhaustion (see Bakker et al., 2005; Bakker, Demerouti, Taris, et al., 2003). Bakker, Demerouti, Taris, et al. (2003) showed that the relationship between job demands and exhaustion disappeared when homecare workers possessed many resources (i.e., performance feedback, autonomy, or career opportunities). Similarly, in their study of 805 Finnish teachers, Bakker, Demerouti, Hakanen, and Xanthopoulou (2007) showed that supervisor support, innovativeness, information, appreciation and organisational climate buffered the negative impact of student misbehaviour on work engagement. Furthermore, in a longitudinal test of the JD-R model in a sample of 313 Australian academics, Time 1 resources (perceptions of procedural fairness/justice, job autonomy) directly predicted Time 2 psychological strain and organisational commitment (Boyd, Bakker, Pignata, et al., 2011).

As a key hypothesis of JD-R theory is that job demands will be linked with reduced physical and mental health, it can be anticipated that university workplaces will become increasingly stressful as demands (greater workloads and increased student-staff ratios) increase whilst resources such as autonomy decrease. Whilst the energy depletion hypothesis predicts that active coping will be used to meet the increased demands in the short term, over a prolonged period of time, performance will be reduced as an individual's capacity and energy to meet these perceived demands will become depleted (see Demerouti et al., 2000; Schaufeli & Bakker, 2004). On the other hand, increased opportunities for personal growth, learning and development (e.g., the motivational hypothesis) links job resources to beneficial organisational outcomes through morale and positive work attitudes (e.g., job satisfaction, organisational commitment, trust in senior management, procedural justice). As work environments that offer many resources can foster morale, the

stress interventions implemented at universities will reflect a resource component within the JD-R model. An adaptation of the model (illustrated in Figure 2.1 below) provides the theoretical framework for the studies in this thesis.

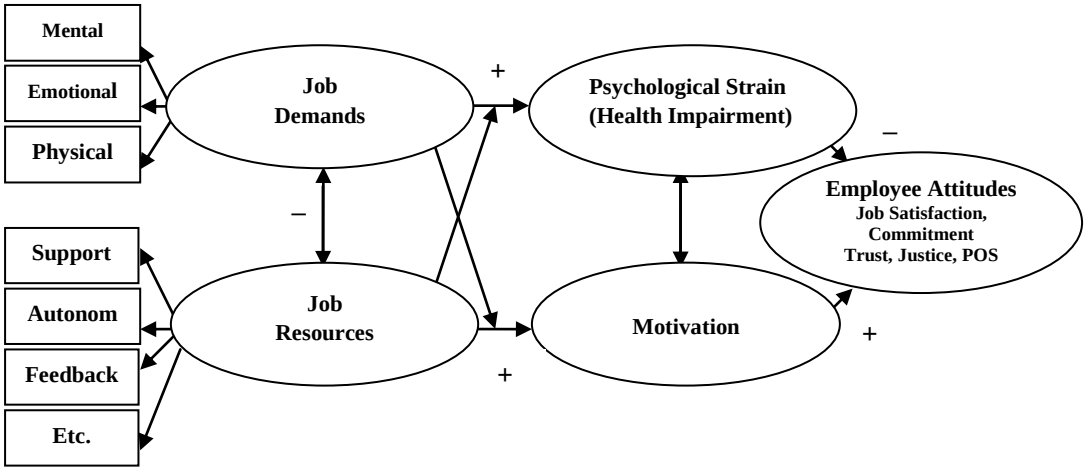


**Figure 2.1.** *An Adaptation of the JD-R Model Showing the Dual Pathways (Bakker & Demerouti, 2007).*

In the model above, job demands require sustained psychological (mental and emotional) and physical effort or skills and are associated with psychological and/or physiological costs (Bakker & Demerouti, 2007). The first process is the health impairment pathway where the ongoing demands of the job eventually exhaust the physical and/or psychological resources of employees and lead to psychological strain and/or emotional exhaustion (burnout) which may then impact adversely on work-related attitudinal outcomes such as job satisfaction, commitment, trust, justice, and perceived organisational support. However, the severity of the occupational stress for employees may also depend on the employee's available job resources that may help them to achieve work goals, or assist in reducing job demands or stimulate feelings of competence (Demerouti et al., 2001). Conversely, the model shows a negative cross-linked pathway from job resources to strain as a lack of resources may preclude goal accomplishment and may be a source of stress (Hakanen, Perhoniemi, & Toppinen-Tanner, 2008).

The second process is the motivational pathway wherein job resources provide both extrinsic and intrinsic motivational roles. Job resources may include supportive interpersonal and social relations, autonomy, feedback, role clarity, and skill variety

(Bakker et al., 2007) that assist employees to achieve work goals and reduce job demands, and foster a sense of achievement and competence that in turn, stimulates personal growth and development. This leads to positive outcomes for the employee and the organisation (i.e., work engagement, lower turnover, higher productivity: Bakker & Demerouti, 2007; Bakker et al., 2004; Harter, Schmidt, & Hayes, 2002) through the work-related attitudes of job satisfaction, commitment, trust, procedural justice, and perceived organisational support.

## 2.7 Applying the Motivational Pathway of the JD-R Model

By examining stress interventions, this thesis focuses on the motivational pathway of the JD-R model. This pathway assumes that job resources in the form of stress management or reduction interventions may play extrinsic (i.e., increased opportunities for promotion, increased performance feedback) motivational roles in helping employees to achieve work goals and reduce job demands. Similarly, interventions may play intrinsic (i.e., greater autonomy, increased skill variety, greater role clarity) motivational roles in assisting to achieve work goals and reduce job demands. Indeed, employees who have high levels of resources available to them are more capable of dealing with demanding work conditions (Bakker, Demerouti, Taris, et al., 2003). Such resources may buffer the effects of job demands on emotional exhaustion and lead to work engagement and the ensuing positive work-related outcomes such as job satisfaction and organisational commitment as demonstrated by existing research (Bakker & Demerouti, 2007), and also enhance employee trust in senior management[1], perceptions of procedural justice, and perceived organisational support. Accordingly, in view of the intervention strategies implemented at the universities between the two time-points, this thesis employs the JD-R theoretical framework to inform several research questions that include:

(1) Investigating whether work environments that offer increased resources (or employee perceptions of increased resources) will show a reduction in employee self-reports of psychological strain and/or increases in positive work attitudes (i.e., job

[1] This thesis defines senior management as those university staff associated with the office of the Vice Chancellor and senior administrators as this was the view reported by employee representatives during a pilot focus group study conducted prior to the AUSS (Gillespie et al., 2001).

satisfaction, organisational commitment, trust in senior management, perceived procedural justice). The stress intervention strategies implemented by HR university management will reflect the resource component within the JD-R model.

(2) Investigating the predictors of procedural justice by applying the JD-R theoretical model to investigate the job demand factors of work pressure and work-home conflict, and the job resource factors of job (in)security, autonomy, trust in senior management, trust in supervisor (head of department), job satisfaction and organisational commitment to determine what types of factors predict procedural justice in the university context.

## 2.8 Summary

Given the dynamic environments in which people work and the adverse effects of work stressors on their well-being and morale, it is clearly important for management to take steps to reduce those stressors. The next step is to use the information obtained from the aforementioned work stress theories, specifically the two key psychosocial factors of job demands and job resources within the JD-R model, whose health-related and motivational effects have been demonstrated in various work settings in order to enhance stress intervention theory and practice. The following chapter provides a discussion of the work stress intervention literature, including the conceptualisation of interventions, the key intervention approaches, the targets of interventions, and the importance of considering all three phases of an intervention strategy.

# Chapter 3:
# Conceptualisation of Stress Interventions

## 3.1 Overview

The preceding chapter examined occupational stress, and provided several theoretical frameworks, specifically the JD-R model, in order to gain an insight into the importance of job resources in reducing occupational stress.

This chapter provides a discussion of the work stress intervention literature, including the conceptualisation, development, implementation and evaluation of interventions. This review examines the research-practice paradigms of organisational redesign (involving intervention methods), and HR policies, and explores primary, secondary, and tertiary approaches to stress reduction and management. In addition, this chapter defines and examines the three categories of individual (person-directed), organisation (work-directed), and the interface between the individual and the organisation (person/work interface-directed) intervention strategies as this framework will be used in subsequent studies in this thesis to categorise and evaluate the interventions implemented in university workplaces.

## 3.2 Conceptualisation of Stress Interventions

In Chapter 1, a stress management intervention was defined as "any activity, program, or opportunity initiated by an organisation, which focuses on reducing the presence of work-related stressors or on assisting individuals to minimise the negative outcomes of exposure to these stressors" (Ivancevich et al., 1990, p. 252). Work stress interventions are delineated into the classifications of primary, secondary or tertiary approaches (Cooper & Quick, 1999). According to Kompier and Cooper (1999), primary interventions are long-term approaches that aim to eliminate, reduce, or alter stressors at work (i.e., reducing staff workloads: Cooper & Quick, 1999). Indeed, a review of primary organisational strategies found that they had positive effects in reducing occupational stressors (Burke, 1993). Secondary interventions aim

to reduce or eliminate the effects of stress in employees who are showing signs of stress, by modifying or changing their stress response to inevitable or unchangeable demands (i.e., relaxation training, team building, stress management programs, programs to increase their coping capacity: Geurts & Gründemann, 1999). Thirdly, tertiary interventions treat employees with serious stress-related health problems by providing professional medical treatment or psychological counselling to heal specific problems (Cooper & Quick, 1999). Moreover, work stress interventions may target the individual, the organisation, or both the individual and the organisation.

### *3.2.1 Individual Interventions*

Individual (person-directed) interventions focus on the employee, or group, to improve their coping resources in order to deal more effectively with demanding situations (Giga, Cooper, et al., 2003) or to modify their appraisal of a stressor to reduce its threat (Geurts & Gründemann, 1999). These interventions include exercise, relaxation training, meditation, biofeedback, cognitive-behavioural therapy, exercise, time management, cognitive coping strategies, stress management programs, and employee assistance programs (DeFrank & Cooper, 1987; Giga, Noblet, et al., 2003; van der Hek & Plomp, 1997).

A comprehensive review of work stress preventive interventions by Kompier and Kristensen (2001) showed that the majority of interventions to prevent mental health problems at work are individual and reactive strategies that focus primarily on changing the individual (through changing their cognitions) rather than changing the organisation and reducing constraints in the psychosocial work environment or the individual/organisation interface. However, recent empirical research has shown that organisational approaches are more effective than individual approaches (Bourbonnais, Comeau, & Vézina, 1999; Kompier & Kristensen, 2001) and are accompanied by more significant and durable effects (Burke, 1993; Kompier & Kristensen, 2001). For example, in one of the largest intervention reviews to date, Taris et al. (2003) evaluated the effectiveness of a large-scale job stress reduction program implemented in 81 organisations within the Dutch domiciliary care sector, and found that a wide variety of measures were implemented, and that only work-directed interventions were linked to a reduction in levels of job stress albeit the effects of those interventions were weak.

Indeed, evidence suggests that psychosocial factors at work such as high demands (e.g., workload) and low resources (e.g., low levels of support) are important inhibitors of well-being and morale that cannot be changed by individual approaches. Primary prevention strategies that focus on causal factors should be the most effective intervention, and using comprehensive interventions that focus on all levels of the organisation is crucial. Indeed, a recent systematic review of the job-stress intervention evaluation literature by LaMontagne, Keegel, Louie, Ostry, and Landsbergis (2007, p. 277) found that interventions directed at the individual were "an essential complement to organisationally-directed intervention, and the complementarity of primary, secondary, and tertiary intervention strategies".

### *3.2.2 Organisational Interventions*

Organisational (work-directed) interventions are often referred to as stressor reduction processes (Newman & Beehr, 1979) and include job redesign, restructuring jobs, selection and placement, training and education programs, communication, clarifying employees' work roles and responsibilities, increasing employees' participation and decision-making authority, improving organisational structure, enhancing the physical environment, and addressing job health concerns and job resource issues (DeFrank & Cooper, 1987; Giga, Noblet, et al., 2003; van der Hek & Plomp, 1997). These interventions focus on the work environment to improve the fit between each employee and the workplace (Geurts & Gründemann, 1999).

### *3.2.3 Individual / Organisation Interface-Directed Interventions*

Individual/organisation interface-directed interventions focus on the interplay between individual employees and the organisation, and include setting up co-worker support groups to improve relationships at work, improving person-environment fit, addressing role issues, and increasing workers' participation and autonomy (DeFrank & Cooper, 1987; Giga, Noblet, et al., 2003; van der Hek & Plomp, 1997). Giga, Noblet, et al. (2003) assert that a combination of multi-level organisational and individual intervention strategies are likely to be most effective in reducing stress as together these address the organisational environment, the individual and the individual-organisation interface.

Stress interventions have been traditionally categorised into the abovementioned three levels, although the boundaries between these levels have been questioned as they are not mutually exclusive and may overlap (Giga, Cooper, et al., 2003). Nevertheless, the studies undertaken in the present thesis will assign the intervention strategies undertaken by universities according to the aforementioned DeFrank and Cooper (1987) classification of occupational stress management programs in order to determine the level at which the interventions are targeted.

In terms of the literature it seems intuitive to suggest that organisations employing predominantly organisation-directed, primary prevention strategies will show greater levels of employee well-being and morale relative to organisations employing predominantly individual-directed interventions alone. The dominant view is that work stress and the resulting mental health outcomes are more strongly related to aspects of the work environment or job factors than to personal or biographical factors (Maslach & Schaufeli, 1993). Indeed, Burke (1993) pointed out that if the number and strength of occupational stressors were reduced, individuals at work would experience less stress. However, the intervention literature demonstrates clearly that work stress programs are predominantly reactive (i.e., secondary or tertiary approaches) strategies directed at individuals (Giga, Cooper, et al., 2003; Kompier, Cooper, & Geurts, 2000).

## 3.3 Dominance of Individual Interventions

Kompier and Cooper (1999; see also Kompier & Kristensen, 2001) assert that there are numerous reasons actual workplace strategies to prevent mental health problems at work are predominantly individual and reactive. Among the reasons for this individual-directed approach is the lack of senior management involvement. In the case of stress complaints, for example, Kompier and Cooper (p. 2) argue that management are inclined to blame individual employees and their personalities, coping styles and lifestyles, and the potential role of stressful life events (i.e., divorce) or family situations, instead of work environment factors. Secondly, because of their training, many professionals who specialise in interventions (e.g., occupational doctors and psychologists) are primarily interested in stress as a subjective experience, and as a result focus on individual differences and counselling, as the doctors and/or psychologists are more comfortable with changing individuals than

changing organisations. Thirdly, stressors may be inherent in the job and there is limited empirical evidence that interventions in the psychosocial work environment may reduce mental health problems. In addition, there is a lack of prior risk evaluation, and the study of the costs and benefits (i.e., financial) of stress prevention has been largely neglected.

Another key reason noted by Kompier and Cooper (1999, pp. 3-5) is the absence of a sound theoretical model of work stress as a basis for intervention. In addition, there is the difficulty of conducting properly designed studies such as longitudinal studies with a randomised control group, and collecting and analysing both subjective and objective measures within the context of dynamic work environments. These methodological difficulties are inherent in both conducting and evaluating the studies. It should also be noted that senior management often view work-stress research as a distraction from the primary processes and focus of the organisation. There is also a tendency for stress researchers to collect "soft" outcome variables in a questionnaire-oriented approach rather than collecting "hard" objective data of stress such as productivity, sickness absenteeism rates, and accident rates. Finally, Kompier and Cooper (p. 5) argue that stress research fails to use an interdisciplinary approach to relate psychosocial work characteristics to other policy areas such as "productivity, labour market facets, company image, human resources management, total quality management". In view of these difficulties, it is important to categorise the critical factors in effective intervention strategies.

## 3.4 Critical Factors in Effective Interventions

In order to develop a "psychosocial intervention science", the key areas that need to be considered include the content of the interventions, the context of the study and its interventions, and the design of the study (Kompier, 2003). According to Kompier and Cooper (1999, p. 334) there are five factors that are critical to a successful occupational stress reduction program:

- *A stepwise and systematic approach,* with clearly determined aims, tasks, responsibilities, planning and financial means
- *An adequate diagnosis or risk analysis* to assess any benefits derived from the program

- *A combination of work-directed and worker-directed measures*, as strategies are often aimed only at improving the coping capacity of employees
- *A participative approach* that involves both employees and middle management
- *Senior management support*, as a stepwise and participative approach is dependent on the ongoing commitment of senior management.

In addition, a multi-level approach to stress management is critical as there may be contextual or group effects (i.e., individuals nested within jobs and work units) that influence outcomes in organisational settings (Morrison & Payne, 2003). For example, Campbell, Dunnette, Lawler, and Weick (1970) showed that the shared perceptions of both formal and informal organisational policies, practices and procedures (i.e., organisational climate) mediated the relationship between objective characteristics of the work environment and individuals' responses. Accordingly, a key purpose of the present research is to examine the relationship between documented HR intervention strategies implemented by management, employee perceptions of those intervention measures and employee well-being and positive work attitudes i.e., job satisfaction and organisational commitment.

A recent study by Teo and Waters (2002) provides evidence of the effect of HR practices in creating a supportive HR environment to help to reduce workplace stressors. According to the authors, HR practices can follow two different pathways in stress intervention. They can aim to (1) remove occupational stressors from the work environment (a primary intervention approach): or (2) assist employees to reduce the strain that is associated with these stressors (a secondary intervention approach). In their cross-sectional study, Teo and Waters examined the role of eight HR practices (i.e., job training, employee communication, job redesign, promotional opportunities, employee involvement, family-friendly practices, pay equity and stress management interventions) in reducing the stressors of role overload and responsibility, and in reducing vocational and interpersonal strain in a sample of 109 Singaporean employees. They found a direct negative relationship between several of these HR practices (i.e., family-friendly practices, job training, and stress management interventions) and interpersonal strain, although the interventions did not reduce the stressors of role overload and responsibility at work.

The present research considers the effect of HR management practices designed to prevent or reduce strain in university staff, and as stated in Chapter 1, will answer a pressing call for research to examine the relationships between objective stress-reduction measures, subjective perceptions of those intervention measures and job conditions, and changes in employee well-being and positive work-related attitudes.

In order to assess the effectiveness of interventions in changing employee levels of well-being and positive attitudes, it is necessary to identify the key phases in intervention research. Goldenhar, LaMontagne, Katz, Heaney, and Landsbergis (2001) proposed a three-phase model for conducting occupational health and safety intervention research which comprises the development, implementation and evaluation phases of an intervention.

## 3.5 A Three-Phase Model for Intervention Research

According to Goldenhar et al. (2001) the *development phase* aims to produce knowledge that can be used to develop appropriate interventions to reduce the prevalence of psychosocial constraints in the workplace. This phase aims to answer questions related to the changes needed and the best way to achieve them, the barriers preventing these changes, and the theories that might apply in that specific intervention context. Secondly, the *implementation phase* evaluates the intervention implementation process by systematically documenting the strategies implemented in order to produce changes to the workplace. This phase describes what types of changes were implemented, the difficulties encountered, and the target population. The final *effectiveness phase* aims to demonstrate whether the intervention was successful in reducing the prevalence of adverse work factors and of illnesses, by evaluating the effects of the intervention on the prevalence of psychosocial constraints at the workplace, and on objective measures such as the prevalence of mental health problems, and the incidence of sickness absences. The benefit of this model is that scientific knowledge is produced in each of the three phases: however, few intervention studies have integrated these phases. An aim of this thesis is to integrate some aspects of the effectiveness component of this model.

## 3.6 Summary and Conclusions

The stress intervention literature highlights the conceptual and methodological issues in intervention research and focuses on the need for further research. This review has identified the guidelines and factors that are crucial to effective stress interventions. Knowledge of the three distinct approaches (primary, secondary, tertiary) to stress interventions and the target population (i.e., individual, organisation, individual/organisation interface) informs this thesis, as Study 4 identifies the actual preventive or management strategies undertaken by the participating universities. The study also categorises the interventions into the three target population categories. In addition, Study 4 examines responses from senior university management regarding the key stress-reduction strategy undertaken at their university, the content and extent of the strategy, and its targeted group(s).

With regard to the JD-R theoretical model discussed in Chapter 2, increased job resources in the form of management interventions to reduce and/or manage stress and build employee morale, may buffer the relationship between job demands and stress reactions, as employees who have high levels of resources available to them are more capable of dealing with demanding work conditions and consequently experience lower levels of stress or exhaustion (Bakker, Demerouti, Taris, et al., 2003). Studies 5 and 6 will examine employees' reports of the stress-reduction strategies or practices that were considered to be effective in reducing their level of stress at work, and will also categorise these interventions into the three target population categories.

The following chapter presents the context of the present thesis and describes the working conditions within the Australian university sector, with a specific focus on the results of the Australian University Stress Study as this study provides the background for the present thesis.

# Chapter 4:
# The University Context

## 4.1 Overview

The preceding chapter highlighted the complexity of interventions and intervention research. Despite those difficulties, there is a need for further research to identify what types of intervention strategies are effective in improving stressful work environments for both employees and organisations. This chapter examines the contemporary challenges facing organisations, specifically those within the university sector in Australia, and discusses the findings of the Australian University Stress Study (AUSS; see Winefield et al., 2002, 2003). An important aspect of the present thesis is the availability of the extensive AUSS data base that may provide evidence of any within-subjects changes in work stress that occurred between the two waves of the survey.

## 4.2 Introduction

Contemporary organisations are undergoing continual, rapid changes that include: an increasing focus on downsizing and outsourcing (Cooper, 1998); open market competition (Macdonald, 2003); work intensification in greater time constraints, greater workload demands and increased hours of work (Cooper, 1998; Macdonald, 2003); growth in the diversity of employees (Landy, Quick, & Kasl, 1994); and an emergent contingent workforce (Sauter & Murphy, 1995). These ongoing demands are fundamentally changing the Higher Education University Sector (HEUS) in both Australia and overseas. For example, in a recent Commonwealth Government commissioned review of the Australian Higher Education sector, Bradley et al. (2008b, p. 7) note that:

> The higher education system is at the forefront of many of the processes of globalisation. Higher education now involves intensive global networking among institutions, academics and students, as well as with business and industry.

Given the Australian government's recent decision to implement the Excellence in Research for Australia (ERA) Initiative (Australian Research Council [ARC], 2010), and recently announced growth plans setting increased targets for the attainment of bachelor degrees (Bradley, Noonan, Nugent, & Scales, 2008a), occupational stress in university staff, and strategies to reduce stress, are clearly areas that call for further research.

## 4.3 The University Setting

As discussed in Chapter 1, empirical evidence has shown that the university sector in Australia is under intense strain (e.g., increased workload leading to high levels of stress) (see Dua, 1994; Gillespie et al., 2001; Winefield, A., et al., 2008; Winefield, T., et al., 2008; Winefield et al., 2002; Winefield et al., 2003; Winefield & Jarrett, 2001). Similar findings have been reported recently from Canada (Biron, Brun, & Ivers, 2008); South Africa (Barkhuizen & Rothmann, 2008); The Netherlands (Taris, Schreurs, & van Iersel-van Silfhout, 2001); the United Kingdom (Abouserie, 1996; Bradley & Eachus, 1995; Kinman, 2001; Kinman, Jones, & Kinman, 2006; Tytherleigh, Jacobs, Winefield, Webb, & Cooper, 2005; Tytherleigh, Jacobs, Webb, Ricketts, & Cooper, 2007; Wilkinson & Joseph, 1995); and the United States (Altbach, 1996; Blix, Cruise, Mitchell & Blix, 1994; Boswell, Olson-Buchanan, & LePine, 2004; Gmelch, Wilke, & Lovrich, 1986; Hogan, Carlson, & Dua, 2002; Liu, Spector, & Shi, 2008; Richard & Krieshok, 1989). These studies have shown that work-related stress in universities has risen internationally due to increased work pressures and reduced government support.

In 2001, the *Universities In Crisis* report, (Senate Committee Report, 2001), showed that the Australian Commonwealth Government's contribution to University operating grants declined from $4772m in 1994 to $4461m in 2000, despite increases in student enrolments, whilst student-staff ratios have grown markedly within the last two decades, from 12.9 in 1990 to 20.3 in 2005 (Universities Australia, 2007).

It is therefore not surprising that a recent report by Coates et al. (2009, p. 2) on the changes facing academics in Australia, highlights "the need for more policy development, planning and research on Australia's academic workforce". The reasons for this need include the findings that Australian academics are less satisfied with their work than their international colleagues, report one of the highest propensities

for job change (either out of the profession or the country), and work among the longest hours per week (particularly those in the senior ranks who work the highest of any group internationally). The report by Coates and colleagues accessed data from 18 of the 25 countries in the Changing Academic Profession (CAP) survey which was conducted in 2007 to assess the characteristics of academic staff and their work. The 18 countries that participated in this research were Argentina, Australia, Brazil, Canada, China, Finland, Germany, Hong Kong, Italy, Japan, Korea, Malaysia, Mexico, Norway, Portugal, South Africa, the United Kingdom, and the United States. In Australia, valid responses were received from 1,370 academics from 20 of Australia's universities.

This situation appears to be similar in overseas universities, as reported by Kinman et al. (2006) who compared the findings of two studies (1998, 2004) examining the well-being of academic staff in British universities. Respondents were asked whether they wished to leave the higher education sector. Those academics who indicated that they were seriously considering leaving the sector were asked to provide reasons. Whilst there were no significant differences between the findings in 1998 and 2004, 48% of the respondents in 2004 reported that they had seriously considered leaving the higher education sector in the preceding five years. The reasons given included job insecurity, the degree of stress they experienced, work overload and conflicting job roles. Kinman and colleagues also suggest that British academics feel a constant pressure to spend more time with students and as a result it is reasonable to assume that students may be dissatisfied with their present level of accessibility and opportunities for communication with academic staff. Indeed, students in Australia report similar dissatisfaction with the accessibility of academic staff, as Bradley et al. (2008b, p. 33) state that:

> The student experience of higher education is vastly different from that of a generation ago. Apart from the huge increase in the size of the sector (from just over 300,000 students in 1977 to over 980,000 in 2006), there is now a much wider range of courses and specialisations on offer...However, students report less access to staff, with a substantial number of first-year students perceiving staff as not accessible and less than one-third feeling that teaching staff take an interest in their progress and give helpful feedback (Krause et al 2005).

Given that the student:staff ratio is also increasing in Australian universities it can be speculated that the situation is similar in Australia, and that this pressure may also be a source of stress for Australian academics. It should be noted that the

functional roles of academic staff differ markedly from those of non-academic staff, and research has shown differences amongst employee populations working in the university context (see Winefield et al., 2003). Winefield et al.'s study, for example, found different relationships between stress and performance by occupational category of employee, with Australian academic staff reporting slightly higher levels of psychological distress and lower levels of job satisfaction compared with non-academic staff. For this reason, the AUSS commenced in 2000 in order to investigate the levels of occupational stress in Australian university employees.

## 4.4 The AUSS

The nationwide, longitudinal AUSS commenced in 2000 to investigate current levels of stress (i.e., high levels of psychological strain and low levels of job satisfaction) in all salaried staff at 17 universities (see Winefield et al., 2003). The study was supported by grants from the Australian Research Council (ARC), the National Tertiary Education Union and the Vice-Chancellors of the participating universities.

The first phase of the research involved a survey of 22 focus groups (consisting of 178 academic and non-academic staff) in order to understand their experience of occupational stress, perceptions of the sources, consequences and moderators of stress, and record their recommendations for reducing stress. Both non-academic and academic staff reported a dramatic increase in stress during the previous five years. As a group, academic staff reported higher levels of stress than non-academic staff. The major sources of stress were identified as insufficient funding and resources, work overload, poor management practice, job insecurity, and insufficient recognition and reward (Gillespie et al., 2001).

The 2000 survey of 8732 staff at 17 universities confirmed very high levels of psychological distress and perceptions of excessive workloads. Employees (particularly academics) at most universities reported dissatisfaction with, and distrust of university management, which, together with perceived unfairness in university appointment, promotion and redundancy procedures, led to low levels of organisational commitment (Winefield et al., 2002; Winefield et al., 2003). In addition, employee perceptions of procedural justice and trust in senior management were identified as key predictors of stress (see Winefield et al., 2002). Winefield and

colleagues also found that staff perceptions of procedural justice were low, and that procedural justice was a strong predictor of job satisfaction and employees' commitment to the university. Indeed, employees' trust in senior management strongly predicted job satisfaction and organisational commitment in both academic and non-academic staff. In terms of employee levels of affective commitment to the university, workplace factors (i.e., trust in senior management, procedural justice, autonomy) were shown to be the best predictors of academics' commitment to their university as they accounted for 21% of the total variance. This was in contrast to demographic factors (i.e., occupational level) and individual difference factors (i.e., job involvement, extraversion, negative affectivity, hardiness) which accounted for 3% and 14% of the variance respectively. However, for non-academic staff, the individual difference factors of job involvement, extraversion, conscientiousness, hardiness, and maladaptive coping were more predictive of commitment than workplace factors (Winefield et al., 2002).

Winefield et al. (2003) also found that self-report measures of occupational stress were significantly and negatively related to objective university-based performance measures such as funding cuts, and investment income. On the basis of the data, and to enable these universities to implement measures to reduce and manage occupational stress in university workplaces, Winefield et al. (2002) proposed several multi-level interventions. They proposed that: (1) at an individual employee level, measures were required to increase staff awareness of Employee Assistance Programs; (2) at a departmental level, universities should review: the fairness of promotion, redundancy and performance appraisal procedures; teaching and research demands; and the adequacy of pay, promotion and recognition systems; and (3) at a university and government policy level, universities should develop: leadership capabilities; communication processes and systems to reduce and/or help staff to cope with job insecurity; and strategies to increase financial and staffing resources.

A follow-up survey of 13 of the original 17 universities was conducted by Winefield and colleagues in 2003/04 in order to examine any changes in employees' levels of psychological strain and work-related attitudes (e.g., job satisfaction, organisational commitment – see Winefield, A., et al., 2008; Winefield, T., et al., 2008). This three-year interval was chosen so that the two waves of data collection would take place at the same phase of the triennial negotiations between unions and

senior university management over working conditions. The Time 2 survey of 6301 staff at 13 universities revealed that despite increases in psychological strain, there were important improvements in certain areas (e.g., increased trust in senior management, commitment to the organisation, perceptions of procedural justice).

Hence, in view of the aforementioned recommendations for developing, implementing and evaluating interventions stated in Chapters 1 and 3, the AUSS research and its data base: (1) meet the criteria for interventions to: comprise participatory and multi-level approaches supported by union and senior management; (2) answer a call for evaluations of interventions to be longitudinal and consider third variables to assist in clarifying job stress mechanisms (Zapf et al., 1996); and (3) use multiple self-report and objective measures (Briner & Reynolds, 1999). Thus, the AUSS longitudinal data set enables the present research to examine employee-level perceptions of the interventions that were implemented by university management to reduce stress and increase well-being, and to relate them to the observed changes in employee attitudes and well-being within each university.

The following chapter examines social-exchange theory and the POS literature as the present thesis proposes that employee awareness of stress intervention strategies is an indicator of POS. The chapter also contains a summary of the work stress and management research literature regarding psychological strain and the positive work attitudes of job satisfaction, affective organisational commitment, trust in senior management, and perceived procedural justice.

# Chapter 5:
# Employee Well-being and Work Attitudes

## 5.1 Overview

This chapter examines the social-exchange concept of perceived organisational support (POS) as it relates to employee perceptions of intervention strategies and the employee and organisational benefits of this reciprocal relationship. As stated in Chapter 1, high levels of POS benefit employees in terms of enriching their jobs or working environments (Eisenberger et al., 1986), and assisting them to perform their work effectively (Rhoades & Eisenberger, 2002). POS also benefits organisations, as high levels of POS produce an obligation for employees to care about the organisation's welfare and to increase their efforts to help the organisation succeed (Eisenberger et al., 2004; Rhoades & Eisenberger, 2002). It is also expected that employees may hold favourable perceptions regarding those introduced measures and this may, in turn, contribute to benefits for both employees (e.g., increased well-being, higher morale) and their employing organisation (e.g., increased employee commitment to the organisation). This expectation is based on the norm of reciprocity, where there is a reciprocal obligation for individuals to respond positively to the valued resources that they receive from others. These reciprocal obligations will be discussed within the framework of social-exchange theory that was defined in Chapter 1.

This chapter also contains a summary of the research literature regarding psychological strain and the positive work attitudes of job satisfaction, affective organisational commitment, trust in senior management, and perceived procedural justice, as psychological strain and these attitudinal outcomes were found to be of key importance to university staff in the AUSS. The chapter also examines the influence of POS on well-being and the abovementioned work attitudes. This material forms the background for the studies described in Chapters 6, 7, and 8.

## 5.2 Social-Exchange and Perceived Organisational Support

The central tenet of social-exchange theory (Blau, 1964) is that individuals enter into relationships to acquire valuable resources. For employees, these resources may include tangible benefits such as pay, and socio-emotional resources such as the communication of approval, trust, and respect. Hence, a psychological contract exists between the two parties to stipulate what is owed within the exchange relationship (Rousseau, 1989), and, furthermore, the "reciprocation of increasingly valued resources strengthens the exchange relationship over time" (Aselage & Eisenberger, 2003, p. 492). Psychological contract fulfilment occurs when an organisation provides an employee with benefits and services and, in return, the employee displays positive attitudes and work outcomes (i.e., training and support, in exchange for loyalty, performance; Coyle-Shapiro & Conway, 2005). This concept of reciprocity forms the basis of perceived organisational support (POS).

As outlined in Chapter 1, the social-exchange model of POS refers to the general belief among employees about the extent to which an organisation's management values their contributions, considers their well-being, cares about their goals and values, treats them fairly, enriches their jobs or working environments (Eisenberger et al., 1986), and assists them to perform their work effectively (Rhoades & Eisenberger, 2002). Consequently, high levels of POS produce an obligation for employees to care about the organisation's welfare and to increase their efforts to help the organisation succeed (Eisenberger et al., 2004; Rhoades & Eisenberger, 2002).

Eisenberger et al. (1986) suggest that POS is based on the extent to which employees view their history of treatment by the organisation as favourable, and employees give attention to organisational efforts to recognise and reward their workplace behaviours. POS assures employees that help will be available from the organisation when they need it to carry out their job effectively and to deal with stressful situations (Rhoades & Eisenberger, 2002). Growing empirical evidence supports a positive relationship between supportive organisational practices and POS.

According to Huffman, Watrous-Rodriguez, and King (2008, pp. 240–241), organisational support includes both formal and informal practices and procedures, and is "a high-level, inclusive construct focusing on organisational functions and environments that are needed for success". These practices include affording

employees autonomy (Eisenberger, Rhoades, & Cameron, 1999), and job security (Rhoades & Eisenberger, 2002). Eisenberger and colleagues (1986) note that the greater the inducements provided by the employer in recognition of employee contributions, the more POS is likely to be enhanced. They assert that employees use attributional processes like those used in interpersonal relationships to infer organisational support, thus resources that are given voluntarily are more welcome than those that are obligated.

These positive resources have been linked to favourable outcomes for both the employee and the organisation. For example, a recent meta-analytic review by Riggle, Edmondson, and Hansen (2009) found that POS has a strong, positive effect on job satisfaction. In addition, the individual and organisational benefits of POS have been demonstrated in research which has identified a positive relationship between POS and in-role performance (Eisenberger, Fasolo, & Davis-LaMastro, 1990), extra-role performance (Chen, Eisenberger, Johnson, Sucharski, & Aselage, 2009), organisational citizenship behaviour (Moorman, Blakely, & Niehoff, 1998), organisational commitment (Rhoades & Eisenberger, 2002; Riggle et al., 2009), and a negative relationship between POS and absenteeism (Eisenberger et al., 1986), and turnover (Allen, Shore, & Griffeth, 2003). Moreover, in their research on expatriates, Guzzo, Noonan, and Elron (1994) argue that POS represents the employees' psychological contract with their organisations.

POS includes policies that promote employee well-being (Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001) hence, the implementation of strategies to manage and reduce stress is arguably an indication of the degree to which an organisation values and cares for its employees, and seeks to promote their well-being. A pilot study by Pignata and Winefield (2006), for example, investigated the relationship between staff perceptions of stress-reduction measures and their impact on psychological strain, and organisational attitudes of job satisfaction, organisational commitment, procedural justice and trust in senior management. Using a case-study approach, they interviewed the Occupational Health and Safety (OH&S) manager at one university and obtained objective measures of multiple individual and organisational stress-reduction interventions systematically implemented at the university between the two survey phases (2000-2004). In addition, staff from that university were surveyed in 2004 and asked whether they believed that their

university had undertaken any measures to reduce stress over the four year period. The researchers found that positive answers to this question were linked to higher levels of work and organisational attitudes (i.e., job satisfaction, procedural justice, organisational commitment and trust in senior management) than were negative perceptions of stress-reduction interventions at the university. This evidence suggests that at an employee level, the perceived implementation of stress-reduction interventions at their university is significant to the health and work attitudes of staff.

As POS captures an individual's perception of organisational treatment (Coyle-Shapiro & Conway, 2005), the present thesis proposes that employee awareness of stress interventions implemented in their workplace is an indicator of POS. Consequently, the study reported in the following chapter will extend the research by Pignata and Winefield (2006) by investigating the relationship between this indicator of POS and well-being and morale, in a larger sample of universities. The conceptual model presented in Figure 5.1 depicts the links between POS and psychological strain and positive work-related attitudes.

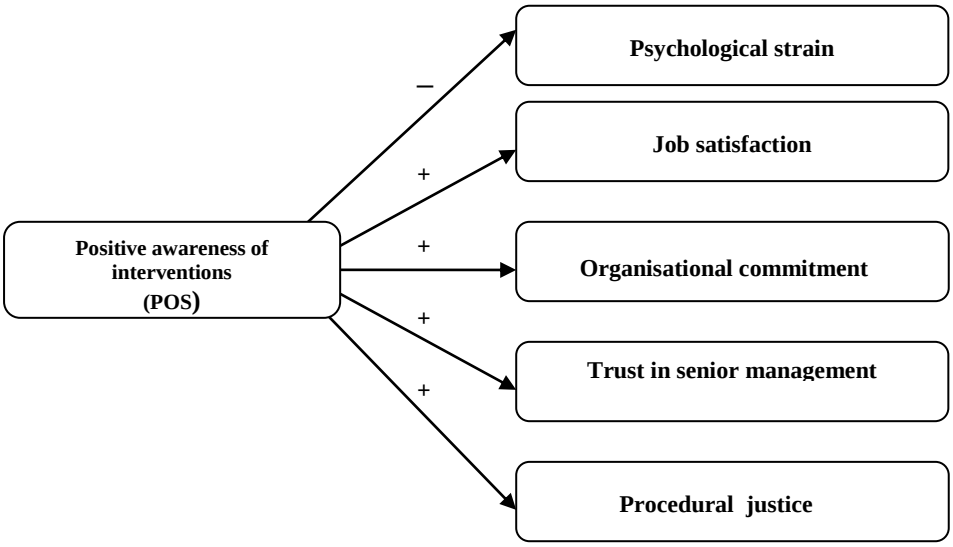


**Figure 5.1.** *A Conceptual Model Linking POS with Strain and Work Attitudes.*

Briefly, in the model above, employees' awareness of intervention strategies implemented in their university workplace is an indicator of POS. Employees'

positive perceptions of those interventions are related to lower levels of psychological strain, and higher levels of job satisfaction, commitment to the organisation, trust in senior management, and perceived procedural justice. A considerable body of research has examined and confirmed relationships between POS and each of the above well-being and attitudinal outcomes. This research will be reviewed in the following section.

## 5.3 The Influence of POS on Well-Being and Positive Work Attitudes

### *5.3.1 Psychological Strain*

Psychological strain may be defined as a response characterised by subjective feelings of distress and other negative symptoms which include anxiety, depression and social withdrawal (Massé et al., 1998). As mentioned in Chapter 1, psychological strain has frequently been investigated as an outcome in work stress research (Mansell et al., 2006). Research evidence supports a link between POS and psychological strain as a meta-analytic review by Rhoades and Eisenberger (2002) found a moderate negative relationship between POS and psychological and psychosomatic strain experienced in the workplace. As a result, the authors suggest that POS may help to reduce the negative consequences of stressors at work.

Previous studies have found job satisfaction (Abouserie, 1996; Dua, 1994; Winefield & Jarrett, 2001), organisational commitment (Taris et al., 2001), trust in senior management (Gillespie et al., 2001), and perceived procedural justice/fairness (Hartman et al., 1999) to be of particular importance to university staff, as has research within the current sample (Winefield et al., 2002; Winefield et al., 2003; Winefield, A., et al., 2008; Winefield, T., et al., 2008).

### *5.3.2 Job Satisfaction*

Job satisfaction has been referred to as the broad positive emotional reactions and attitudes individuals have towards their jobs (Locke, 1969), and refers to an affective judgement of the content and/or the circumstances of their job. Cross-sectional research has linked job satisfaction with health and well-being (Cass, Siu, Faragher, & Cooper, 2003). Hackman and Oldham (1975) assert that job satisfaction is influenced directly by job characteristics and is determined by autonomy, task

identity, task significance, skill variety and task feedback. These aspects are often included in job redesign interventions that attempt to increase the variety and autonomy of an individual's job (Arnold, Cooper, & Robertson, 1995).

With regard to demographic influences, research has also shown that employees' age and their length of organisational tenure are associated with job satisfaction. For example, in terms of Herzberg's two-factor theory, Herzberg, Mausner, Peterson, and Capwell (1957) assert that the association of tenure and age with job satisfaction follows a U-shape relationship, as workers in their early stages of employment usually experienced low job satisfaction due to unfulfilled work expectations. However, when those workers advanced in their careers they gained maturity and work experience which led them to a more realistic level of work expectations, which in turn, led to higher job satisfaction.

Research has also shown that individuals differ in what they find satisfying in their job. In the university context, for example, academics reported intrinsic factors such as student interaction, relationships with fellow colleagues, the prestige of academic positions, autonomy and job variety as their areas of greatest satisfaction (Kinman, 2001; Winefield et al., 2002). Indeed, an academic's diverse work role includes teaching, thesis supervision, research/scholarship, administration, consultancy, and community service (McInnis, 1999).

As non-academic employees work in professional (e.g., accountant), clerical or administrative, technical, and service (e.g., cleaners, security, hospitality) roles (Winefield et al., 2002), there are marked differences in the functional roles of academic and non-academic university staff. Due to these differences, and in view of the abovementioned research evidence, the demographic characteristics of length of organisational tenure, occupational group, gender, and age will be entered as control variables in the analyses in Study 1 of this thesis to reduce the possibility of noise in the analyses. However, Study 2 in this thesis will allow comparisons between academic and non-academic university staff to explore potential occupation-specific associations between POS and work-related attitudes.

### *5.3.3 Affective Organisational Commitment*

Commitment may be defined as "a force that binds an individual to a target (social or non-social) and to a course of action of relevance to that target" (Meyer, Becker, & Van Dick, 2006, p. 666). Allen and Meyer (1990) broadly defined organisational commitment as the psychological link between an employee and the organisation, and that commitment invokes both psychological and behavioural attachment. According to Allen and Meyer, commitment is a multi-dimensional construct that consists of three relatively distinct components: affective, normative and continuance commitment. Affective commitment relates to an individual's level of emotional attachment to their organisation. Secondly, normative commitment relates to a sense of loyalty and obligation that the individual has towards the organisation. Thirdly, continuance commitment refers to the investment a person has made to the organisation in their career, and an awareness of the costs associated with leaving the organisation (Allen & Meyer, 1990). Given that Randall, Fedor, and Longenecker (1990) found that affective commitment was a better predictor of behavioural outcomes than normative and continuance commitment, the present thesis focuses on affective organisational commitment.

Affective organisational commitment reflects an individual's identification with and involvement in the organisation (Meyer & Allen, 1991), and refers to loyalty to the employer, because a committed individual: (1) strongly identifies with the organisation, accepting its goals and values; (2) exerts effort on its behalf; and (3) values its membership (Mowday, Steers, & Porter, 1979). Allen and Meyer (1990) found that individuals who felt comfortable in their work role and competent in their work expressed greater affective commitment to their organisation. These feelings of comfort and competency were achieved through their perception of the organisation's dependability, the receptiveness of management to their suggestions, the cohesiveness of employees within the organisation, the equitable treatment of employees, and their role and goal clarity.

Commitment to the organisation develops from employee experiences at work and, similar to a social exchange process, an employee's commitment can be increased by providing him or her with positive experiences (Arnold et al., 1995). Workplace relationships play a significant role in developing an employee's

attachment towards their organisation. For example, in their meta-analysis, Mathieu and Zajac (1990) found that the quality of communication between managers and employees and the level of participatory leadership directly influenced employee commitment levels, and suggested that supervisors who provide accurate and timely communication create the kind of work environment in which committed employees are more likely to remain.

Existing research has demonstrated the organisational benefits of a strongly committed workforce. In their meta-analysis, Meyer, Stanley, Herscovitch, and Topolnytsky (2002) found that affective commitment was positively correlated with overall job satisfaction which included co-worker satisfaction and work satisfaction. It is also noteworthy that commitment has important implications for job performance (Riketta, 2002) and organisational citizenship behaviour (Meyer et al., 2002). Affective organisational commitment was also positively related to POS (Aube, Rousseau, & Morin, 2007; Meyer et al., 2002; Rhoades & Eisenberger, 2002; Riggle et al., 2009). Indeed, Rhoades and Eisenberger (2002, p. 710) argue that "employees strongly reciprocate indications of the organisation's caring and positive valuation by increasing their emotional bond to the organisation". In the university context, Hutchison (1997) found that in a survey of 205 faculty and staff members at a large American university, employees' perceptions of support from the organisation had direct effects on their commitment to the organisation. This association was supported by Tan and Tan (2000) who identified perceived organisational support as a possible antecedent of employees' trust in the organisation.

### *5.3.4 Trust*

Trust has been defined as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer, Davis, & Schoorman, 1995, p. 712). Trust is an important factor in organisational success and employee well-being, as employee perceptions about leadership, managerial actions and role clarity strongly influence their morale (Hart & Cotton, 2003). The consequences of managerial trust have been explored extensively in the literature. Specifically, a meta-analysis of the trust in leadership literature by Dirks and Ferrin (2002) showed that the consequences of trust

included organisational commitment, organisational citizenship behaviour, job satisfaction, and intention to stay. Indeed, as mentioned in Chapter 4, the results of the Time 1 AUSS found that employee perceptions of trust in senior management were key predictors of job satisfaction and organisational commitment (see Winefield et al., 2002).

In addition, trust is also an important predictor of employee loyalty (Costigan, Ilter, & Berman, 1998). As trust evolves over time through the repeated interactions of values and attitudes within the exchange relationship between employee-organisation (Jones & George, 1998), the antecedents and consequences of trust seem consistent with the social-exchange model of POS. It is important to note that it is management's role to take the initial step in establishing a trusting relationship as they control the communication channels within the workplace (Whitener, Brodt, Korsgaard, & Werner, 1998). Indeed, Whitener et al. propose that organisational structure, human resource policies and culture would affect employees' perceptions of trust, and furthermore, Whitener (2001) found that POS was related to trust in management. The leadership literature demonstrates that senior management fulfil strategic organisation-wide functions including designing procedures and structures, and the allocation of resources (see Yukl, 2002).

As HR polices are often at the forefront of change initiatives, those managerial functions may include the provision of HR policies that aim to reduce or manage stress in the workplace. Indeed, as trust develops, employees develop 'social decision heuristics' which enable them to automatically assume the best about others' motives (Kramer, 1999). Thus, under these conditions, employees are more likely to assume that new policies and programs publicised by senior management are well intended, and as a result, employees will support their implementation.

### *5.3.5 Perceptions of Justice*

Perceptions of organisational justice comprise three types of fairness: the fairness of the *outcomes* of a decision or allocation of goods (distributive justice); the fairness of the *processes* that are used to make decisions (procedural justice); and the fairness of the *interactions* and treatment that an individual receives from another (relational justice) (Li & Cropanzano, 2009). This thesis focused on the procedural aspect of organisational justice.

Procedural justice refers to how decisions affecting staff are made and the outcomes from those decisions (Greenberg, 1994) and comprises formal organisational policies about processes and decisions (i.e., employee voice in the decision process, adequate notice about decisions) and a social component of treating employees with dignity and respect (Rhoades & Eisenberger, 2002). Perceptions of procedural justice help to shape employees' relationships with their employers (Folger & Cropanzano, 1998) and thus have important consequences for employee attitudes such as job satisfaction and organisational commitment, and behaviours such as organisational citizenship behaviour where employees exceed their explicitly required work responsibilities (Konovsky, 2000). Rhoades and Eisenberger (2002) found that procedural justice has a strong positive relationship with POS, and suggest that employees may perceive that justice is controlled by management.

Ambrose and Schminke (2003) proposed that perceptions of procedural justice could be increased by drafting formal policies that will be seen as fair, as this provides employees with information regarding how outcomes are determined (Rhoades & Eisenberger, 2002), offers them some control over the process, and reassures them about the fairness of decisions (Thibaut & Walker, 1975). Given that employee perceptions of procedural justice help to shape the employee-employer relationship, by applying the norm of reciprocity to the employee-employer relationship, repaying favourable treatment received by either party leads to positive benefits for both parties (Rhoades & Eisenberger, 2002).

Procedural justice has an ethical component due to the mutual exchange process inherent in the psychological contract between employee-employer. Accordingly, an overview of ethics, and ethical principles will be discussed in the examination of procedural justice in Chapter 8 in order to understand what types of factors individuals perceive to be fair and just. Indeed, the rights and responsibilities of employees and employers extend beyond economic concerns such as productivity and competitiveness as employment relationships require fair treatment, equity, and voice for employees (Budd, 2004). For example, employee voice is an ethical consideration as employees' participation in workplace processes may be seen as an acceptance of their rights at work (Provis, 1995).

Indeed, the psychological contract refers to an individual's belief regarding the terms and conditions of an exchange relationship with another party (Rousseau, 1995) which includes "any item that might be exchanged between the organisation and the employee (e.g., pay, training, support, in exchange for loyalty, performance, flexibility)" (Coyle-Shapiro & Conway, 2005, p. 775). Research shows a positive relationship between the perceived fulfillment of a psychological contract and: satisfaction with the organisation, jobs and leaders; organisational commitment; organisational trust; organisational citizenship behaviour; and a negative relationship with turnover intentions (Coyle-Shapiro & Conway, 2005).

However, unlike the one-sided perspective of perceived organisational support, psychological contract theory is based on a mutual exchange of obligations between the employee-employer and the perceived level to which obligations are fulfilled (Coyle-Shapiro & Conway, 2005). The discrepancy between what the organisation promises and what it provides, establishes the basis on which employees reciprocate (Coyle-Shapiro & Conway, 2005) and perceived fair treatment is critical to the continuation of relational psychological contracts (Rousseau & Parks, 1992), whereas violation of a psychological contract raises issues of procedural justice (Lind & Tyler, 1988). This finding is noteworthy in the context of Australian universities (and as detailed in Chapter 4) as employee perceptions of procedural justice and trust in senior management were identified as key predictors of stress in the AUSS Time 1 survey (see Winefield et al., 2002).

### *5.3.6 Influence of Justice Perceptions*

As people seek to reciprocate toward those who benefit them (Blau, 1964), organisational justice perceptions have been recognised as one of the major causes of job satisfaction (Masterson, Lewis, Goldman, & Taylor, 2000; Moorman, 1991). Moreover, Ambrose and Cropanzano (2003) reported dynamic relationships between procedural justice and outcomes that included satisfaction, commitment, and turnover intentions. The existing literature also suggests that POS is related to procedural justice perceptions (Andrews & Kacmar, 2001), and with commitment and organisational citizenship behaviour. Organisational citizenship behaviour has been defined as discretionary behaviour directed towards individuals or at the organisation

as a whole, which goes beyond the existing expectations of the work role, and benefits the organisation or is intended to benefit it (Organ, 1988).

Indeed, when fair procedures are seen to be implemented, employees may feel valued by the organisation, and in return, respond with greater organisational commitment (Eisenberger et al., 2001). As pointed out in Chapter 4, in the context of the AUSS, Winefield et al. (2002) found that staff perceptions of procedural justice were low in the first survey (Time 1). The researchers therefore recommended that the universities review the fairness of promotion, redundancy and performance appraisal procedures in order to enhance staff perceptions of procedural justice and job satisfaction.

Employees who perceive procedural justice as highly discretionary and controlled by management (Rhoades & Eisenberger, 2002) may view actions taken by organisations to increase employee perceptions of justice as an indication of care and concern for their well-being. By contrast, perceptions of unfairness have been associated with important outcomes, including decreased organisational citizenship behaviour and increased intentions to leave the organisation (see Colquitt, Conlon, Wesson, Porter, & Ng [2001] for a meta-analytic review). Moreover, Elovainio, Kivimäki, and Helkama (2001) assert that perceptions of organisational injustice are associated with stress-related outcomes such as psychological strain. Given the moderate negative relationship between POS and psychological and psychosomatic strain at work (Rhoades & Eisenberger, 2002), higher levels of POS may, in turn, lead to lower levels of strain.

As discussed in Chapter 3, organisations need to take a multi-level approach to stress management as there may be contextual or group effects (i.e., individuals nested within jobs and work units) that influence outcomes in organisational settings. This is particularly relevant to examining procedural justice due to its interpersonal context, in that organisational policies and procedures affect a number of individuals simultaneously. Mossholder, Bennett, and Martin, (1998), for example, investigated the role of the procedural justice context in employees' work-related attitudes (job satisfaction and organisational commitment) within and among organisational work units of a financial services organisation. They found significant within-unit agreement and between-unit variation in procedural justice perceptions, and that

employees in work units with higher aggregate perceptions of procedural justice reported greater job satisfaction than those expected by individual perceptions of procedural justice.

Consistent with the social-exchange process, POS, and employee perceptions of trust in senior management and procedural justice evolve over time through the repeated interactions of values and attitudes within the exchange relationship between employee and organisation. This thesis proposes that trust in senior management and perceptions of procedural justice may play a mediating role in linking POS with strain and the work attitudes of job satisfaction and affective organisational commitment.

## 5.4 Mediating Influence of Trust and Justice

The present thesis examines both trust in senior management, and perceived procedural justice as putative mediators in linking POS with psychological strain and the attitudes of job satisfaction and affective organisational commitment. Positive assessments of supportive stress-management practices from their organisation may also create a perpetual sequence that encourages trust in senior management and/or increases an employee's perception of fair and just organisational procedures, which, in turn, may create an obligation for the employee to respond with pro-organisational attitudes such as organisational commitment and job satisfaction, and mediate the negative relationship between POS and psychological strain.

### *5.4.1 Trust in Senior Management*

The mediating role of trust has support from the existing literature. Chen, Aryee and Lee (2005), for example, found that trust in the organisation fully mediated the POS and organisational commitment relationship, while Whitener (2001) reported that employee trust in the employer partially mediated this relationship. This mediation sequence may also extend to the promotion of employee well-being as there is empirical support of a moderate negative relationship between POS and psychological and psychosomatic strain experienced at work (Rhoades & Eisenberger, 2002). There is also evidence that employees expressing higher trust in management tended to report lower signs of personal strain such as burnout (Harvey, Kelloway, & Duncan-Leiper, 2003).

### *5.4.2 Procedural Justice*

The link between fairness perceptions and satisfaction is consistent with a recent meta-analysis by Rhoades and Eisenberger (2002) in which fairness, supervisor support, and organisational rewards and favourable job conditions received by employees were associated with perceived organisational support, which in turn was linked to employee job satisfaction and positive mood. Moreover, Masterson et al. (2000) examined employee relationships with both their supervisor and their employer and found that procedural justice increased perceptions of organisational support, which increased both organisational commitment and citizenship behaviours directed toward the employer. This mediating proposition is supported by empirical evidence. For example, in a recent meta-analysis, Rhoades and Eisenberger (2002) showed that fairness, supervisor support, and organisational rewards and favourable job conditions received by employees were associated with POS, which in turn was linked to employee job satisfaction and positive mood.

### *5.4.3 Association between Trust and Procedural Justice*

Perceptions of fair conduct are also likely to be important for reinforcing employee trust. Indeed, trust and justice may influence each other, in addition to their individual effects upon commitment. For example, retrospective assessments of organisational procedures, in terms of procedural justice, can influence an employee's present assessments of trust (Folger & Konovsky, 1989; Mayer et al., 1995; Organ, 1988). Consistent with this suggestion, studies have shown that procedural justice promotes trust, and that trust in turn promotes affective organisational commitment (Bijlsma & Koopman, 2003; Connell, Ferres, & Travaglione, 2003). Specifically, in a study of trust within manager-subordinate relationships within a large Australian public health sector organisation, Connell and colleagues found that POS and procedural justice were predictors of trust in managers and that turnover intent and commitment were significant outcomes. Existing research and theory suggest a significant association between trust in management and procedural justice, and objective measures of university financial resources (Gillespie et al., 2001), and organisational performance (Brockner, 2002; Dirks & Ferrin, 2002).

Evidence from numerous studies supports the mediating role of trust in senior management and perceived procedural justice in linking POS with psychological

strain, job satisfaction and organisational commitment. The mediation model depicting the aforementioned relationships is presented in Figure 1 in the following chapter.

## 5.5 Summary

This review summarises the research literature relating to psychological strain and the positive attitudes and benefits of job satisfaction, affective organisational commitment, trust in senior management, perceived procedural justice and POS for both employees and organisations. By doing so, this chapter has highlighted the multi-faceted benefits of positive perceptions of the workplace in terms of improvements in well-being and positive work attitudes that employers and organisations can adopt to enhance work environments for employees in universities in the face of increasing demands and decreasing financial resources. This literature forms the background for the longitudinal studies in Chapters 6, 7, and 8 that: (1) examine relationships between POS and well-being and positive attitudes; (2) examine the impact of the status variables of occupational staff group and tenure in the relation between POS and positive attitudes; and (3) investigate the predictors of employees' perceptions of procedural justice.

The following chapter presents a paper that examines the social-exchange model of POS to identify a potential link between POS and reduced psychological strain, and work attitudes of job satisfaction, affective organisational commitment, trust in senior managment and perceived procedural justice. This study proposes that employee perceptions of stress-reduction interventions in their organisation is an indicator of POS, as the organisation's practices and policies about the treatment of employees sends signals about the extent to which the organisation cares about the welfare of employees (Gillespie & Dietz, 2009; Kraimer & Wayne, 2004). In addition, this study examines the mediating influence of trust in senior management, and procedural justice in linking POS with psychological strain and work attitudes.

This paper is presented in the format required by the journal in which it is submitted to. The paper is preceded by a brief introduction, and followed by a brief discussion linking the paper to each other and to the project as a whole.

# Chapter 6:
# Study 1 – Perceived Organisational Support and Work Attitudes

## 6.1 Overview

This study extends the existing research described in Chapter 5, by examining the social-exchange model of POS to identify a potential link between POS and reduced psychological strain, and improved work attitudes of job satisfaction, affective organisational commitment, trust in senior managment and perceived procedural justice. The study proposes that employee perceptions of stress-reduction interventions in their organisation are an indicator of POS, as organisational policies signal to employees what the organisation values and believes to be important.

In addition, this study examines the mediating influence of trust in senior management, and procedural justice in linking POS with psychological strain and work attitudes. Consistent with the social-exchange model of POS, trust and perceptions of procedural justice evolve over time through the repeated interactions of values and attitudes within the exchange relationship between employee-organisation.

The following paper is presented in the format required by the Australian Journal of Management and is currently under review[2].

## 6.2 Paper Under Review:

Pignata, S., Boyd, C. M., Winefield, A. H., Provis, C., & Gillespie, N. (under review) Awareness of organisational support: The impact on employee well-being and attitudes. *Australian Journal of Management*.

[2] Aspects of this paper were presented at the 2008 International Congress of Psychology, Berlin, Germany, 20-25 July, 2008. Pignata, S., & Winefield, A. H. (2008). *Stress-reduction interventions: Perceived organizational support in Australian universities*.

# Awareness of Organisational Support: The Impact on Employee Well-Being and Attitudes

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**Abstract**

We examined the effect of awareness of stress-reduction interventions on employee well-being, perceptions of trust in senior management, and procedural justice using the social-exchange model of perceived organisational support (POS). Longitudinal data are presented from 869 employees who completed questionnaires at two time-points at 13 universities. Analyses indicated that employees who reported that interventions had been undertaken, scored lower on strain and higher on job satisfaction and commitment than those who did not perceive the measures. We conclude that POS is linked to improved well-being. The study further revealed that trust and justice mediated the relationship between POS and well-being.

**Keywords**

perceived organisational support, social-exchange, interventions, trust, justice

## 1. Introduction

The central tenet of social-exchange theory is that individuals enter into relationships to acquire valuable resources. Based on the norm of reciprocity, there is an obligation for individuals to respond positively to the valued resources that they receive from others. For employees, these resources may include tangible benefits such as pay, and socio-emotional resources such as the communication of approval, trust, and respect (Blau, 1964). Hence, a psychological contract exists between the two parties to stipulate what is owed within the exchange relationship (Grimmer and Oddy, 2007; Rousseau, 1989), and, furthermore, the "reciprocation of increasingly valued resources strengthens the exchange relationship over time" (Aselage and Eisenberger, 2003, p. 492).

In the social-exchange model of perceived organisational support (POS), Eisenberger et al. (1986) suggest that POS is based on the extent to which employees view their history of treatment by the organisation as favourable and give attention to organisational efforts to recognise and reward their workplace behaviours. POS assures employees that help will be available from the organisation when they need it to carry out their job effectively and to deal with stressful situations (Rhoades and Eisenberger, 2002). As employees personify the organisation on the basis of organisational actions, policies, and norms, we propose that both employees and organisations can achieve favourable outcomes if employees perceive that they are well treated. One way employees evaluate how they are treated by the organisation is in terms of the provision of organisational practices, such as the implementation of stress-reduction interventions.

The individual and organisational benefits of POS have been demonstrated in numerous studies. Research has identified a positive relationship between POS and job satisfaction (Rhoades and Eisenberger, 2002; Riggle et al., 2009), organisational commitment (Rhoades and Eisenberger, 2002; Riggle et al., 2009), trust in management (Whitener, 2001), procedural justice (Rhoades and Eisenberger, 2002), in-role performance (Eisenberger et al., 1990), extra-role performance (Chen et al., 2009), organisational citizenship behaviour (Moorman et al., 1998), and a negative relationship between POS and absenteeism (Eisenberger et al., 1986), and turnover (Allen et al., 2003).

The present study was intended to extend this research on POS by examining the relationship between positive employee perceptions of stress-reduction strategies, and reduced psychological strain, and improved work attitudes of job satisfaction and affective organisational commitment. Consistent with the social-exchange model of POS, we also examine trust in senior management and employee perceptions of procedural justice as putative mediators in the aforementioned relationships, as both trust and justice perceptions evolve over time through the repeated interactions and decision processes within the employee-organisation exchange relationship. We propose that POS may foster employee perceptions of trust in senior management or perceptions of procedural justice which, in turn, may create an obligation for the employee to respond with pro-organisational attitudes such as organisational commitment and job satisfaction, and reduced levels of psychological strain.

We aim to make unique contributions to the literature in several ways. First, we propose that employee perceptions of stress-reduction interventions in their organisation are an indicator of POS, as the organisation's practices and policies about the treatment of employees sends signals about the extent to which the organisation

cares about the welfare of employees (Gillespie and Dietz, 2009; Kraimer and Wayne, 2004).

Second, there is an increasing interest in stress-reduction interventions within organisational settings but there are few evaluative studies of stress interventions (Caulfield et al., 2004; Cooper, 2001). Reasons for this relate primarily to the methodological and conceptual difficulties inherent in stress-intervention research. Consequently, we answer a call from Briner and Reynolds (1999, p. 648) for research to address the fundamental question of "why should and how could organisational level stress interventions work?" We aim to contribute to understanding this question in three ways: 1) by using a longitudinal design to examine relationships between POS and psychological strain and positive work-related attitudes; 2) by focusing on employee awareness of HR practices; and 3) by examining how they impact, by exploring trust and justice as mediators in the relation between POS and the outcomes of organisational commitment, job satisfaction, and psychological strain. In the following sections, we describe the constructs, hypotheses and context of the study.

### 1.1. Perceived Organisational Support (POS)

Perceived organisational support (POS) refers to the general belief held by an employee about the extent to which an organisation's management values their contributions, considers their well-being, cares about their goals and values, treats them fairly, enriches their jobs or working environments (Eisenberger et al., 1986), and assists them to perform their work effectively (Rhoades and Eisenberger, 2002). Given their value to employees, high levels of POS produce an obligation for employees to care about the organisation's welfare and to increase their efforts to help the organisation succeed (Eisenberger et al., 2004; Rhoades and Eisenberger, 2002).

In addition to being defined as a general concern for the well-being of employees, Grant-Vallone and Ensher (2001) assert that POS includes increased corporate awareness and support of work and family issues. In short, POS captures an individual's perception of organisational treatment (Coyle-Shapiro and Conway, 2005). According to Huffman et al. (2008), organisational support includes both formal and informal practices and procedures. As POS is understood to include policies promoting employee well-being (Eisenberger et al., 2001), the present study proposes that employee awareness of stress interventions implemented in their workplace is an indicator of POS. Eisenberger and colleagues assert that employees use attributional processes like those used in interpersonal relationships to infer organisational support, thus resources that are given voluntarily are more welcome than those that are obligatory. Notwithstanding the legal requirements for organisations to ensure safe work environments for employees, the voluntary implementation of strategies to manage and reduce stress is arguably an indication of the degree to which an organisation values and cares for its employees.

### 1.2. Hypotheses involving the influence of POS

According to Eisenberger et al. (1986, p. 501) POS "would be influenced by various aspects of an employee's treatment by the organization and would, in turn, influence the employee's interpretation of organizational motives underlying that treatment. This implies that there will be agreement in the degree of support that the employee would expect of the organization in a wide variety of situations." Those situations would include the organisation's likely reaction to and the availability of aid for the employee's future illnesses, mistakes and performance (Eisenberger et al., 1986). Indeed, the norm of reciprocity in the social-exchange theoretical framework of POS provides an assurance that help will be available from the organisation when

employees need it to carry out their jobs effectively and to deal with stressful situations (Rhoades and Eisenberger, 2002).

Rhoades and Eisenberger (2002, p. 710) suggest that besides creating a felt obligation to aid the organisation, POS may help to reduce the negative consequences of stressors at work as "employees with high POS generally find their job more pleasurable, are in a better mood at work, and suffer fewer strain symptoms such as fatigue, burnout, anxiety, and headaches". In a meta-analytic review, they found a moderate negative relationship between POS and psychological and psychosomatic strain experienced in the workplace, supporting this assertion. George et al. (1993), for example, found that nurses who perceived high levels of organisational support believed that their organisation would provide them with resources to cope with stressful situations. Therefore, in line with POS and social-exchange theory, we predicted that employees' perceptions of organisational support in implementing stress interventions would be associated with lower levels of psychological strain (**Hypothesis 1**).

Whilst POS is the belief that the employing organisation cares for the well-being of staff, job satisfaction has been referred to as the broad positive emotional reactions and attitudes individuals have towards their jobs (Locke, 1969). Job satisfaction has been identified as a key attitude that leads to positive organisational outcomes such as high productivity, low absenteeism, and low turnover (Iaffaldano and Muchinsky, 1985). Moreover, a recent meta-analytic review by Riggle et al. (2009) found that POS has a strong, positive effect on job satisfaction. In their discussion of the relation between POS and job satisfaction, Rhoades and Eisenberger (2002, p. 701) propose that "POS should contribute to overall job satisfaction by meeting socio-emotional needs, increasing performance-reward expectancies, and signalling the availability of

aid when needed." Therefore, as a consequence of social-exchange processes, we predicted that employees' perceptions of organisational support in implementing stress interventions would be positively related to their job satisfaction (**Hypothesis 2**).

Another important attitude is affective organisational commitment which refers to loyalty to the employer, because a committed individual: (1) strongly identifies with the organisation, accepting its goals and values; (2) exerts effort on its behalf; and (3) values its membership (Mowday et al., 1979). Affective organisational commitment develops from an employee's experiences at work and, similar to a social exchange process, an employee's commitment can be increased by providing positive experiences (Arnold et al., 1995). This is supported by empirical evidence (Rhoades and Eisenberger, 2002; Riggle et al., 2009) that POS is strongly and positively related to affective organisational commitment. Rhoades and Eisenberger (p. 710) suggest that "employees strongly reciprocate indications of the organisation's caring and positive valuation by increasing their emotional bond to the organisation". In a university context, Hutchison (1997) found that in a survey of 205 faculty and staff members at a large American university, employees' perceptions of support from the organisation had direct effects on their commitment to it. Accordingly, we proposed that employees' perceptions of organisational support in implementing stress interventions would be positively related to their affective commitment to the organisation (**Hypothesis 3**).

## 2. Mediating Role of Trust and Justice

### 2.1. Trust

Trust has been defined as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer et al., 1995, p. 712). It is an important factor in organisational success and employee well-being, as employee perceptions about leadership, managerial actions and role clarity strongly influence their morale (Hart and Cotton, 2003). Evidence of this relationship is demonstrated by Griffin and Bateman (1986), who found positive correlations with leadership behaviours that initiate structure (e.g. defining roles) and demonstrate trust and job satisfaction.

Trust is also an important predictor of organisational commitment (Aryee et al., 2002), and employee loyalty (Costigan et al., 1998). As trust evolves over time through the repeated interactions of values and attitudes within the exchange relationship between employee-organisation (Jones and George, 1998), the antecedents and consequences of trust seem consistent with the social-exchange model of POS. Indeed, Whitener (2001) found that POS was related to trust in management. We propose that POS may foster perceptions of senior management trustworthiness which, in turn, may create an obligation for the employee to respond with pro-organisational attitudes such as organisational commitment and job satisfaction.

Chen et al. (2005) found that trust in the organisation fully mediates the POS and organisational commitment relationship, whereas Whitener (2001) reported that trust in management partially mediates this relationship. Moreover, high levels of trust are positively linked with commitment and job satisfaction (Morgan and Hunt 1994).

Indeed, when employees believe that they receive valued benefits such as trust from their leaders, they tend to develop an obligation to reciprocate, and may enhance their job performance in order to repay their leader (Erdogan and Enders, 2007). This may have strong consequences for employee attitudes towards the organisation, as employees who support and trust the actions of their employer tend to be more satisfied with their employment relationship and more committed to the organisation (Brockner et al., 1997; De Gilder, 2003). Specifically, we expected that employees' perceptions of trust in senior management would mediate the positive relationship between POS and organisational commitment (**Hypothesis 4**), and perceptions of trust in senior management would mediate the positive relationship between POS and job satisfaction (**Hypothesis 4a**).

Senior management have high organisational status and influence within the organisation, and as a result, are associated with higher-level decisions with an organisation-wide focus. This would suggest that senior management are responsible for implementing and managing organisational and HR policies that aim to improve employee well-being and morale, such as stress-reduction strategies. Given evidence that employees expressing higher trust in management tended to report lower signs of personal strain such as burnout (Harvey et al., 2003), and a moderate negative relationship between POS and psychological and psychosomatic strain experienced at work (Rhoades and Eisenberger, 2002), we propose that when employees perceive their organisation to be supportive, this increases the level of trust held by the employee that senior management will take part in the exchange process in a way that meets their expectations. Consequently, on the basis of social exchange theory, we predicted that perceptions of trust in senior management would mediate the negative relationship between POS and psychological strain (**Hypothesis 4b**).

## 2.2. Procedural Justice

Procedural justice refers to how decisions affecting staff are made and the outcomes from those decisions (Greenberg, 1994), and comprises formal organisational policies about processes and decisions (i.e. employee voice in the decision process, adequate notice about decisions) and a social component of treating employees with dignity and respect (Rhoades and Eisenberger, 2002). Perceptions of procedural justice help to shape employees' relationships with their employers (Folger and Cropanzano, 1998) and thus have important consequences for employee attitudes such as job satisfaction and organisational commitment, and behaviours such as organisational citizenship behaviour where employees exceed their explicitly required work responsibilities (Konovsky, 2000). Rhoades and Eisenberger (2002) found that procedural justice had a strong positive relationship with POS, and suggest that employees may perceive that justice is controlled by management. Indeed, Shore and Shore (1995) propose that repeated occasions of fair decisions in terms of the distribution of resources have a strong cumulative effect on POS as they indicate care and concern for employees' welfare.

As people seek to reciprocate those who benefit them (Blau, 1964), organisational justice perceptions have been recognised as one of the major causes of job satisfaction (see Masterson et al., 2000; Moorman, 1991). Moreover, Ambrose and Cropanzano (2003) reported dynamic relationships between procedural justice and outcomes that included satisfaction, commitment, and turnover intentions. The literature also suggests that POS is related to procedural justice perceptions (Andrews and Kacmar, 2001), and with organisational citizenship behaviour and commitment. Indeed, when fair procedures are seen to be implemented, employees may feel valued by the organisation, and in return, respond with greater organisational commitment

(Eisenberger et al., 2001). Hence, we predicted that perceptions of procedural justice would mediate the positive relationship between POS and organisational commitment (**Hypothesis 5**), and perceptions of procedural justice would mediate the positive relationship between POS and job satisfaction (**Hypothesis 5a**).

Given the moderate negative relationship between POS and psychological and psychosomatic strain at work (Rhoades and Eisenberger, 2002), POS may, in turn, lead to lower levels of strain. Elovainio et al. (2001) assert that perceptions of organisational injustice are associated with stress-related outcomes such as psychological strain. On the other hand, employees who perceive procedural justice as highly discretionary and controlled by management (Rhoades and Eisenberger, 2002) may view actions taken by organisations to increase employee perceptions of justice as an indication of care and concern for their well-being. It seems reasonable to suggest that perceptions of procedural justice play a linking role between POS and strain, as employee perceptions of organisational support lead to perceptions of justice that, in turn, lead to lower levels of strain. Consequently, we predicted that perceptions of procedural justice would mediate the negative relationship between POS and psychological strain (**Hypothesis 5b**).

Figure 1 presents the mediation model which we developed to integrate the literature and guide our research, as we hypothesised that perceptions of procedural justice would mediate the positive relationship between POS and the outcomes of psychological strain, organisational commitment, and job satisfaction. In addition, we hypothesised that perceptions of trust in senior management would mediate the positive relationship between POS and the outcomes of psychological strain, organisational commitment, and job satisfaction.

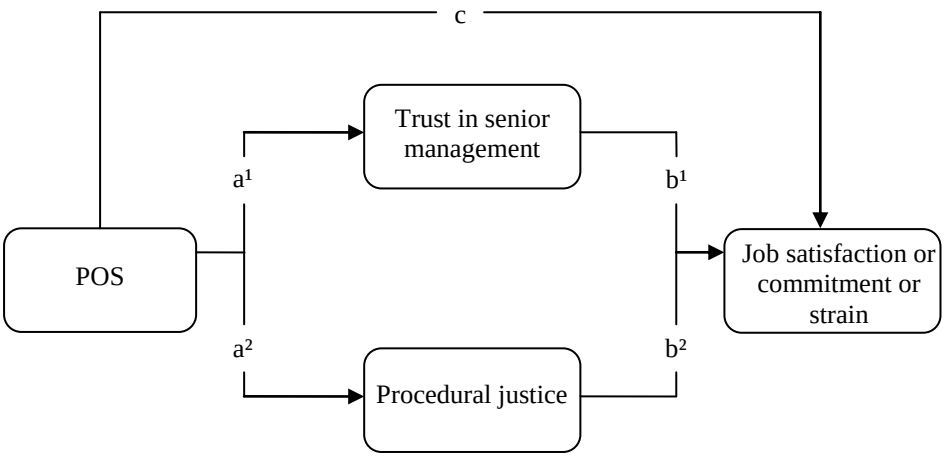


**Figure 1.** The Mediation Model

## 3. METHOD

### 3.1. The University Context

We examine employee-level perceptions of stress-reduction interventions in the context of higher education institutions in Australia. Recent research on university staff has shown that work-related stress in universities has risen internationally due to increased work pressures and reduced government financial support (Biron et al., 2008; Liu et al., 2008; Taris et al., 2001; Tytherleigh et al., 2007). Specific to the Australian context, the negative impact of economic and management imperatives on the health and well-being of academic and non-academic staff in Australian universities has been well demonstrated (Winefield, 2002; Winefield et al., 2008). A qualitative focus group study of occupational stress in 15 Australian universities showed that university staff experienced high levels of stress, with insufficient funding and resources, increased workloads, poor management practice, reduced prospects for career development, and insufficient recognition and reward being identified as the major sources of stress (see Gillespie et al., 2001). This evidence that

the Australian university sector was experiencing high levels of occupational stress made it an appropriate context to examine the impact of POS on employee strain and work-related attitudes.

### 3.2 Participants and Procedure

Of the 969 participants who responded to both waves of a two-wave longitudinal study of occupational stress (the Australian University Stress Study: see Winefield et al., 2008), this study focused on the 869 participants who responded to the measure of POS: "During the past 3 years has your university undertaken any measures to reduce stress among its employees?" The study sample of 869 salaried staff (as distinct from casual or hourly paid) comprised 327 men (38%) and 542 women (62%). The average age in 2003 was 46.5 years (*SD* = 9.24) while the average length of tenure was 12.1 years (*SD* = 7.34). The sample comprised 372 (43%) academic staff (faculty) and 497 (57%) non-academic staff who responded to both the 2000 (Time 1) and 2003/4 (Time 2) surveys at a representative sample of 13 Australian public universities. This sample is broadly representative of the national profile of 42% academic and 58% non-academic staff (Department of Education, Science and Training [DEST], 2003), which suggests that valid comparisons can be made. The majority of the sample were non-academic staff who worked in clerical / administrative (*n* = 237, 27%), non-academic (*n* = 147, 17%), technical (*n* = 91, 10%), general service (*n* = 7, 1%), or other classifications (*n* = 7, 1%). The sample of academic staff comprised tutors/ research assistants (*n* = 61, 7%), lecturers (*n* = 124, 14%), senior lecturers (*n* = 114, 13%), Associate Professors /Professors (*n* = 61, 7%), and other classifications (e.g. Deans; *n* = 7, 1%). No job classification was reported by 13 (2%) respondents.

Participation in both surveys was anonymous but data were matched across surveys using code identifiers. Staff were asked to provide the first three letters of their mother's maiden name (if unknown, the first three letters of their mother's first name), the first three letters of their father's first name, and their date of birth and gender.

Paper surveys were completed in 2000 (Time 1) by 6756 participants, giving a response rate of 25%. At Time 2, surveys were completed electronically in 2003/4 by 6321 participants, a response rate of 26%. The 869 participants represent approximately 13% of the Time 1 respondents. In regard to these mixed-mode surveys, it should be noted that the measurement equivalence of paper-and-pencil and internet organisational surveys was recently demonstrated in a large-scale examination across 16 countries (see De Beuckelaer and Lievens, 2009).

### 3.3 Measures

Both the Time 1 and Time 2 survey questionnaires were administered to all staff, and sought general demographic information (i.e. university, gender, length of tenure and age). The following health and well-being measures, and organisational attitude measures were used in the survey. The five measures of direct relevance, described below, had internal reliabilities between .69 and .96 (Cronbach's alpha coefficients), thus indicating acceptable reliability (see Table 2). The means shown for psychological strain and job satisfaction are based on the total scores, whereas the measures of affective organisational commitment, perceived procedural justice and trust in senior management are based on the item means.

Psychological strain was measured using the 12-item General Health Questionnaire (GHQ-12: Goldberg and Williams, 1988) which is generally accepted

as a valid and reliable measure of psychological impairment in Australian populations (Andrews et al., 1999). An example item is "Have you recently been feeling unhappy and depressed?" Each item was scored on a 4-point Likert scale (0 = *better than usual*; 3 = *much less than usual*), with higher scores indicating higher levels of distress. Scores on individual items were summed to produce a total score.

Job satisfaction was assessed using the 15-item scale developed by Warr et al. (1979). An example item is "How satisfied or dissatisfied do you feel with your opportunity to use your abilities?" Each item was scored on a 7-point Likert scale (1 = *extremely dissatisfied*; 7 = *extremely satisfied*), and scores on individual items were summed to produce a total job satisfaction score.

Five items were adapted from Porter et al's (1974) measure of affective organisational commitment to measure the extent to which employees identified with their university and were committed to its goals. An example item is "I really care about the future of this university." Each item was scored on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*).

Trust in senior management was measured using an 8-item scale developed from Mayer and Davis (1999) and Butler (1991). An example item is "Senior Management of my University treat staff fairly." Each item was scored on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*).

Procedural justice was assessed using four items from a scale developed from focus group discussions with university staff (Gillespie et al., 2001). The items asked staff to rate the fairness of performance appraisal, appointments, and promotions procedures in their workplace. An example item is "In my university, promotions procedures are fair". Each item was scored on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*).

To measure perceptions of organisational support in implementing stress-reduction interventions (POS), we used an intervention evaluation component in the Time 2 survey. Employees were asked: "During the past 3 years has your university undertaken any measures to reduce stress among its employees?" Response options were (1 = *Yes*, 2 = *No*, 3 = *Don't Know*). These options were recoded in a binary format (0 = *No / Don't Know*, 1 = *Yes*) to distinguish between those with an awareness of stress-reduction measures and those with no knowledge of the measures.

To reduce the possibility of noise introduced by the demographic characteristics, four control variables were entered in all the equations: age, gender (1 = *male*, 2 = *female*), length of organisational tenure, and occupational group (1 = *academic*, 2 = *non-academic*). To illustrate the importance of these controls, as POS evolves over time through repeated exchanges, older and longer tenure employees who have been with the organisation for longer periods may develop a more favorable view of their treatment by the organisation (Rhoades and Eisenberger, 2002) whereas, dissatisfied employees are more likely to leave the organisation. Hellman et al. (2006) suggest that there is a possible influence of age on the measurement of POS.

### 3.4 Attrition Analyses

Attrition analyses indicated that the 869 people who responded at both times were not substantially different from those who responded only at Time 1 ($N$ = 5776). Whilst the proportion of the total number of Time 1 participants who responded at Time 2 is small, the attrition analyses show that selective dropout was not a problem in our study. Table 1 displays the characteristics of both samples, and the means and standard deviations of the variables under investigation. The two groups differed in two ways: the study sample contained a higher percentage of women (62.4%) than the Time 1 only sample (53.5%); and the study sample scored higher on levels of Time 1

organisational commitment. However, the magnitude of the difference in the means was very small: eta squared = .001.

**Table 1.** Attrition Analyses

| | Study sample ($N$ = 869) | | Time 1-only sample ($N$ = 5776) | | |
|---|---|---|---|---|---|
| Variable | *n* | % | *n* | % | $\chi^2(df = 1)$ |
| Gender[a] | | | | | |
| Male | 327 | 37.6 | 2509 | 43.4 | 15.79*** |
| Female | 542 | 62.4 | 3089 | 53.5 | |
| Occupational group[b] | | | | | |
| Academic | 372 | 42.8 | 2492 | 43.1 | 0.95 |
| Non-academic | 497 | 57.2 | 3099 | 53.7 | |
| | *M* | *SD* | *M* | *SD* | *t*(*df*) |
| Age Time 1 | 43.50 | 9.24 | 43.96 | 11.25 | −1.15 (6313) |
| Psychological strain Time 1 | 13.34 | 5.93 | 13.11 | 6.04 | 1.04 (6549) |
| Job satisfaction Time 1 | 66.26 | 13.39 | 65.38 | 14.18 | 1.69 (6232) |
| Organisational commitment Time 1 | 3.49 | 0.69 | 3.42 | 0.70 | 2.75 (6588)** |
| Trust in senior management Time 1 | 2.53 | 0.86 | 2.54 | 0.89 | −0.31 (6451) |
| Procedural justice Time 1[c] | 2.93 | 0.81 | 2.91 | 0.87 | 0.63 (6471) |

*Note*. [a]178 respondents (0.03%) did not disclose their gender at Time 1 only; [b]185 respondents did not disclose their occupational group at Time 1 only; [c]Measure includes performance appraisal, appointment, communication, and consultation responses.
**$p < .01$. ***$p < .001$.

### 3.5 Analytical Strategy

Hierarchical regression analyses were used to test the impact of POS on the levels of strain, job satisfaction, and organisational commitment. In all cases, POS was the

independent variable with two levels (*No/Don't Know*, and *Yes*). Age, gender, length of tenure, occupational group and respondents' scores on the relevant Time 1 variables were included in the analyses as control variables at Step 1.

Next, we tested for simple mediation using the non-parametric bootstrapping procedure recommended by MacKinnon (2000) and elaborated on by Preacher and Hayes (2004) designed to estimate the sampling distribution of the indirect effect. This methodology was preferred over the Sobel test or causal steps approach as it has higher power while maintaining reasonable control over the Type 1 error rate (see MacKinnon et al., 2002; MacKinnon et al., 2004 for a review). A bootstrapping method (with $n$ = 5000 bootstrap resamples) using the Statistical Package for the Social Sciences (SPSS) macro provided by Preacher and Hayes (2004) was used to assess the indirect effects. Each indirect effect is estimated multiple times by repeatedly sampling cases with replacement from the data and estimating the model in each resample. Interpretation of the bootstrap data is accomplished by determining whether zero is contained within the 95% confidence intervals (thus indicating the lack of significance).

We also used the bootstrapping method in our test for multiple mediation (see Hayes, 2009; Preacher and Hayes, 2008a, 2008b), as this methodology allowed us: (a) to test the indirect effect of each mediator variable while controlling for all other variables in the model; and (b) to undertake a pair-wise contrast of specific indirect effects. Using the SPSS macro provided by Preacher and Hayes (2008a), two types of confidence intervals were computed (i.e. percentile confidence interval, and bias-corrected and accelerated confidence interval). As a stringent test of mediation, we considered point estimates of indirect effects significant when zero was not contained in any of the confidence intervals.

## 4. RESULTS

Analyses were performed using SPSS Statistics 17.0 software. Preliminary checks were conducted to ensure that there was no violation of the assumptions of multicollinearity, normality, linearity, and homoscedasticity. Two multivariate outliers were identified through Mahalanobis distance with $p < .001$, and were deleted. The means, standard deviations, internal reliability coefficients and bivariate correlations are displayed in Table 2.

**Table 2.** Descriptive Statistics and Variable Inter-Correlations

| Variable | M[a] | SD | α | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Age | 46.50 | 9.24 | — | | | | | | | | | | | | | | |
| 2. Gender | 0.62 | 0.48 | — | −.15** | | | | | | | | | | | | | |
| 3. Tenure | 12.08 | 7.34 | — | .46** | −.09* | | | | | | | | | | | | |
| 4. Group | 1.57 | 0.50 | — | −.19** | .20** | −.07 | | | | | | | | | | | |
| 5. PS T1 | 13.34 | 5.93 | .90 | −.01 | −.06 | .04 | −.10** | | | | | | | | | | |
| 6. PS T2 | 14.02 | 6.50 | .92 | −.05 | −.03 | −.02 | −.04 | .35** | | | | | | | | | |
| 7. JS T1 | 66.26 | 13.39 | .87 | −.06 | .13** | −.13** | .18** | −.40** | −.23** | | | | | | | | |
| 8. JS T2 | 65.43 | 14.89 | .89 | −.03 | .11** | −.04 | .17** | −.33** | −.42** | .63** | | | | | | | |
| 9. OC T1 | 3.49 | 0.69 | .79 | −.01 | .08* | −.09** | .18** | −.21** | −.17** | .49** | .34** | | | | | | |
| 10. OC T2 | 3.51 | 0.79 | .84 | −.04 | .10** | −.03 | .19** | −.22** | −.23** | .41** | .53** | .62** | | | | | |
| 11. TM T1 | 2.53 | 0.86 | .95 | −.08* | .03 | −.18** | .19** | −.21** | −.20** | .55** | .40** | .45** | .40** | | | | |
| 12. TM T2 | 2.64 | 0.93 | .96 | −.12** | .05 | −.14** | .18** | −.21** | −.27** | .44** | .57** | .38** | .56** | .59** | | | |
| 13. PJ T1 | 3.06 | 0.67 | .69 | .00 | .03 | −.07* | −.02 | −.20** | −.13** | .54** | .42** | .31** | .29** | .41** | .36** | | |
| 14. PJ T2 | 3.09 | 0.82 | .76 | −.01 | −.01 | .03 | .05 | −.20** | −.26** | .42** | .67** | .23** | .41** | .33** | .51** | .52** | |
| 15. POS | 0.21 | 0.41 | — | −.03 | .06 | −.04 | .18** | −.02 | −.10** | .15** | .24** | .15** | .18** | .16** | .21** | .05 | .15** |

*Note.* $N$ = 681−869. PS = Psychological strain, OC = Organisational commitment, JS = Job satisfaction, TM = Trust in senior management, PJ = Procedural justice, POS = Perceived organisational support. [a]For PS and JS, item scores were summed. Item scores were averaged for OC, PJ, and TM.

*$p$ < .05. **$p$ <.01. ***$p$ < .001.

Hierarchical regression analyses were used to test the impact of POS on the levels of strain and employee attitudes. Listwise deletion of missing data was used in all analyses. Table 3 displays the unstandardized regression coefficients (*B*) and their standard errors, the standardized regression coefficients (β) and adjusted $R^2$ for each step.

For psychological strain, the demographic variables and Time 1 strain variable explained a significant 12.4% of the variance at Step 1. Time 1 strain was the only predictor. At Step 2, the effect of POS, although small, was significant and negative, $\beta = -.10$, $p < .01$, $\Delta R^2 = .01$. Together, the variables accounted for 13.3% of the total variance in strain.

For job satisfaction, the control variables explained a significant 40.5% of the variance at Step 1, with three predictors: Time 1 job satisfaction, tenure and occupational group. The effect of POS was significant but small at Step 2, $\beta = .14$, $p < .001$, $\Delta R^2 = .02$. Tenure also remained as a predictor, $\beta = .07$, $p < .05$. Overall, the model accounted for 42.4% of the total variance.

Turning to commitment, the control variables explained a significant 39.8% of the variance at Step 1. We found significant but small effects of POS at Step 2, $\beta = .08$, $p < .01$, $\Delta R^2 = .01$. Occupational group also remained as a predictor, $\beta = .06$, $p < .05$. Together, the variables accounted for 40.4% of the total variance. In sum, POS remained a significant predictor of lower levels of strain, and higher levels of job satisfaction, and commitment even when prior levels of the dependent variable were included as additional predictors in the analyses.

**Table 3.** Hierarchical Regression Analyses for Relations between POS, Strain and Attitudes

| | Step 1 | | | | | Step 2 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Measure | *B* | *SE B* | β | *t* | | *B* | *SE B* | β | *t* | |
| **Psychological strain** | | | | | | | | | | |
| Age | −0.03 | .03 | −.04 | −1.09 | | −0.03 | .03 | −.04 | −1.11 | |
| Gender | −0.09 | .46 | −.01 | −0.20 | | −0.02 | .46 | −.00 | −0.04 | |
| Tenure | −0.02 | .03 | −.02 | −0.46 | | −0.01 | .03 | −.01 | −0.28 | |
| Staff Group | −0.29 | .45 | −.02 | −0.65 | | −0.08 | .46 | −.01 | −0.18 | |
| Time 1 Strain | 0.39 | .04 | .35 | 10.42*** | | 0.38 | .04 | .34 | 10.40*** | |
| POS | | | | | | −1.45 | .54 | −.09 | −2.67** | |
| *Adj.* $R^2$ | | | | | .12 | | | | | |
| *F* | | | | | 22.77*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | .01 |
| *F* change | | | | | | | | | | 8.15** |
| **Job satisfaction** | | | | | | | | | | |
| Age | 0.02 | .05 | .01 | 0.36 | | 0.01 | 0.05 | .01 | 0.18 | |
| Gender | 0.85 | .85 | .03 | 1.00 | | 0.82 | 0.84 | .03 | 0.98 | |
| Tenure | 0.12 | .06 | .06 | 1.93* | | 0.12 | 0.06 | .06 | 2.12* | |
| Staff Group | 1.64 | .85 | .06 | 1.94* | | 0.91 | 0.84 | .03 | 1.15 | |
| Time 1 Satisfaction | 0.69 | .03 | .63 | 22.41*** | | 0.67 | 0.03 | .61 | 21.94*** | |
| POS | | | | | | 5.00 | 1.00 | .14 | 5.08*** | |
| *Adj.* $R^2$ | | | | | .40 | | | | | |
| *F* | | | | | 110.14*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | .02 |
| *F* change | | | | | | | | | | 25.84*** |
| **Organisational commitment** | | | | | | | | | | |
| Age | −0.02 | .01 | −.04 | −1.30 | | −0.02 | 0.01 | −.04 | −1.36 | |
| Gender | 0.29 | .22 | .04 | 1.32 | | 0.28 | 0.22 | .04 | 1.28 | |
| Tenure | 0.03 | .02 | .05 | 1.67 | | 0.03 | 0.02 | .05 | 1.75 | |
| Staff Group | 0.59 | .22 | .07 | 2.66** | | .48 | .22 | .06 | 2.17* | |
| Time 1 Commitment | 0.70 | .03 | .61 | 22.60*** | | .69 | .03 | .60 | 22.21*** | |
| POS | | | | | | .78 | .26 | .08 | 2.97** | |
| *Adj.* $R^2$ | | | | | .39 | | | | | |
| *F* | | | | | 114.10*** | | | | | |

| | Step 1 | | | | Step 2 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Measure | *B* | *SE B* | β | *t* | *B* | *SE B* | β | *t* | |
| $\Delta R^2$ | | | | | | | | | .01 |
| *F* change | | | | | | | | | 8.85** |

*Note.* $N$ = 810–869. $\Delta R^2$ = change in $R^2$. POS = Perceived organisational support.

*$p \leq .05$. **$p \leq .01$. ***$p < .001$.

### 4.1. Simple Mediation

Preacher and Hayes' (2004) SPSS macro uses both the Sobel (*z*) test for normal distribution and the bootstrapping procedure, and provides the unstandardized coefficients required by Baron and Kenny (1986) to test mediation. Given that Baron and Kenny's requirement that both *a* and *b* coefficients were statistically significant was met for each model, the total effect (*c* path) and the direct effect (*c′* path) are detailed below. Table 4 displays the point estimate and the 95% confidence interval results using the bootstrapping procedure for the three outcome variables.

For commitment, the Sobel test estimate of the indirect effect of POS on commitment through trust was 1.13 and significant, $z = 6.05$, $p < .001$. The bootstrap estimate of 1.13 was also significant, as the true indirect effect was estimated to lie between 0.775 and 1.504 with 95% confidence. As zero was not in the confidence interval, the indirect effect was significantly different from zero at $p < .05$. Using Baron and Kenny's (1986) causal steps strategy, the total effect of POS on commitment (*c* path) was significant, $c = .29$, $SE = .02$, $t(679) = 18.84$, $p < .001$. The effect of POS on commitment was reduced but still significant when controlled for trust, $c' = .65$, $SE = .28$, $t(678) = 2.31$, $p < .05$, which is consistent with partial mediation.

The *z*-test estimate of the indirect effect of POS on commitment through justice was .60, $z = 3.85$, $p < .001$. Similarly, the bootstrapped estimate of the indirect effect was .60, and the effect was significant and should lie between 0.289 and 0.917. The total effect of POS on commitment was significant, $c = .47$, $SE = .04$, $t(685) = 11.24$, $p < .001$. The effect of POS on commitment was reduced after controlling for justice, $c' = 1.33$, $SE = .34$, $t(684) = 3.90$, $p < .001$ which suggests partial mediation.

For job satisfaction, mediation was confirmed as the estimate of the indirect effect of POS on satisfaction through trust was 4.40, $z = 6.18$, $p < .001$. The bootstrap indirect effect estimate of 4.40 was significant and should lie between 3.045 and 5.828. The total effect of POS on satisfaction was also significant, $c = 1.08$, $SE = .06$, $t(832) = 18.75$, $p < .001$, and the effect was reduced when controlled for trust, $c' = 4.57$, $SE = 1.06$, $t(831) = 4.31$, $p < .001$, which suggests partial mediation.

Second, the estimate of the indirect effect of POS on job satisfaction through justice was 3.70, $z = 3.96$, $p < .001$. Similarly, the bootstrapped estimate of 3.70 was significant and should lie between 1.806 and 5.682. The total effect of POS on job satisfaction was significant, $c = 2.90$, $SE = .13$, $t(666) = 22.30$, $p < .001$. The effect of POS on job satisfaction was reduced when controlled for justice, $c' = 5.36$, $SE = 1.07$, $t(665) = 4.99$, $p < .001$, which is consistent with partial mediation.

Finally, for psychological strain, the estimate of the indirect effect of POS on strain through trust was $-.82$, $z = -4.50$, $p < .001$. The bootstrap estimate of $-.82$ was significant and should lie between $-1.214$ and $-0.486$. Similarly, the total effect of POS on strain was significant, $c = -.24$, $SE = .03$, $t(813) = -7.73$, $p < .001$. However, the effect of POS on strain was markedly reduced and became statistically non-significant after controlling for trust, $c' = -.78$, $SE = .55$, $t(812) = -1.42$, $p > .05$, which is consistent with complete mediation.

The estimate of the indirect effect of POS on strain through justice was also significant, $-.56$, $z = -3.10$, $p < .01$, as was the bootstrapped estimate of $-.56$ which should lie between $-.9305$ and $-.2163$. The total effect of POS on strain was significant, $c = -.49$, $SE = .07$, $t(653) = -6.35$, $p < .001$. The effect of POS on strain was smaller but still significant when controlled for justice, $c' = -1.30$, $SE = .63$, $t(652) = -2.05$, $p < .05$, suggesting partial mediation. Thus, the causal steps test and

the results of both the Sobel and bootstrapping tests for simple mediation agreed that trust in senior management and procedural justice were both simple mediators in the relation between POS and commitment, job satisfaction and strain.

### 4.2. Multiple Mediation

We then tested for multiple mediation (see Hayes, 2009; Preacher and Hayes, 2008a, 2008b) controlling for the Time 1 level of the dependent variable, and the demographic variables of age, gender, occupational group, and length of organisational tenure. The results in Table 4 show that the bootstrapping procedure for multiple mediation (based on 5,000 bootstrap samples) found that trust was a significant mediator of the effect of POS on organisational commitment, job satisfaction and psychological strain (controlling for justice). Likewise, justice was a significant mediator of the effect of POS on commitment, job satisfaction and strain (controlling for trust) as its confidence interval contained zero. We then tested whether these two indirect effects differed significantly. For commitment, an examination of the pairwise contrasts of the indirect effects showed that the specific indirect effect through *trust* is larger than the specific indirect effect through *justice*, with a BCa 95% CI of 0.054 to 0. 511. However, the contrast testing of trust and justice was not significant for strain and job satisfaction, indicating that the magnitude of these indirect effects could not be distinguished.

**Table 4.** Simple and Multiple Indirect Effects of POS (5000 bootstrap samples)

| Measure | N | Point estimate | 95% Confidence Interval | | BCa[a] 95% CI | |
|---|---|---|---|---|---|---|
| | | | Lower | Upper | Lower | Upper |
| | | | Organisational commitment | | | |
| Simple indirect effects | | | | | | |
| Trust | 861 | 1.13 | 0.77 | 1.50 | — | — |
| Justice | 687 | 0.60 | 0.29 | 0.92 | — | — |
| Multiple indirect effects | 670 | | | | | |
| Trust | | 0.42 | 0.20 | 0.66 | 0.21 | 0.67 |
| Justice | | 0.15 | 0.04 | 0.30 | 0.05 | 0.31 |
| Total | | 0.57 | 0.29 | 0.88 | 0.29 | 0.88 |
| Contrast: trust vs. justice | | 0.26 | 0.05 | 0.50 | 0.05 | 0.51 |
| | | | Job satisfaction | | | |
| Simple indirect effects | | | | | | |
| Trust | 834 | 4.40 | 3.05 | 5.83 | — | — |
| Justice | 668 | 3.70 | 1.81 | 5.68 | — | — |
| Multiple indirect effects | 630 | | | | | |
| Trust | | 1.23 | 0.63 | 1.95 | 0.65 | 1.98 |
| Justice | | 1.46 | 0.31 | 2.72 | 0.32 | 2.77 |
| Total | | 2.69 | 1.23 | 4.23 | 1.25 | 4.26 |
| Contrast: trust vs. justice | | −0.22 | −1.48 | 0.98 | −1.53 | 0.95 |
| | | | Psychological strain | | | |
| Simple indirect effects | | | | | | |
| Trust | 815 | −0.82 | −1.21 | −0.49 | — | — |
| Justice | 655 | −0.56 | −0.93 | −0.22 | — | — |
| Multiple indirect effects | 634 | | | | | |
| Trust | | −0.34 | −0.70 | −0.05 | −0.70 | −0.04 |
| Justice | | −0.28 | −0.59 | −0.05 | −0.66 | −0.07 |
| Total | | −0.62 | −1.02 | −0.28 | −1.03 | −0.30 |
| Contrast: trust vs. justice | | −0.05 | −0.53 | 0.44 | −0.49 | 0.51 |

*Note.* [a]BCa = bias corrected and accelerated bootstrapping confidence intervals that include corrections for both median bias and skew. Confidence intervals containing zero are interpreted as not significant.

## 5. DISCUSSION

The purpose of this study was to employ a longitudinal design to examine employee awareness of intervention measures and the resulting employee-level consequences on levels of psychological strain and the key work-related attitudes of organisational commitment and job satisfaction. We also investigated the mediating role of both trust in senior management and perceived procedural justice between POS and work attitudes using both simple and multiple mediation analysis techniques.

The analyses indicate that POS is linked to improved well-being in terms of reduced levels of psychological strain and increased attitudes of job satisfaction and commitment to the organisation. There was support for Hypothesis 1, as employees who showed awareness of stress-reduction measures being implemented at their university did report a lower level of psychological strain at Time 2 than those who did not perceive the measures. Although this effect was small, our finding is consistent with a meta-analytic review by Rhoades and Eisenberger (2002) who found a negative relationship between POS and psychological and psychosomatic strain experienced in the workplace.

Hypotheses 2 and 3 were both supported as employees' perceptions of organisational support were positively related to their work attitudes as those employees reported significantly higher levels of job satisfaction, and affective organisational commitment, than those who did not perceive the measures. As this study is the first to propose employee awareness of organisational intervention strategies as a putative indicator of POS, it is noteworthy that these findings are in line with extensive empirical evidence that positively links POS to job satisfaction (Rhoades and Eisenberger, 2002; Riggle et al., 2009) and affective organisational commitment (Hutchison, 1997; Rhoades and Eisenberger, 2002; Riggle et al., 2009).

As prior levels of the dependent variable (i.e. Time 1 levels of strain, job satisfaction, commitment) were included as additional predictors in the analysis, tests of the aforementioned relationships are more rigorous as they show that the predictors account for changes in the levels of the dependent variables (Zapf et al., 1996). Although the effect sizes for these relationships were small, it is reasonable to assume that POS may have positively influenced these well-being and work-related attitudes. Whilst causation cannot be inferred, these findings suggest a link that warrants further investigation.

A key contribution of the present study is that awareness of stress interventions is related to trust and justice, as trust in senior management and procedural justice mediated the relationship between POS and employee well-being. Consistent with Whitener (2001), we found that trust in management partially mediated the relation between POS and commitment, and between POS and job satisfaction. In addition, we found that trust also fully mediated the relationship between POS and strain, supporting Hypotheses 4, 4a, and 4b. We also found support for Hypotheses 5, 5a, and 5b as perceived procedural justice partially mediated the relation between POS and strain, commitment, and job satisfaction. Moreover, results from the Sobel tests and the bootstrapping procedures show that both trust in senior management and procedural justice carried the influence of POS to job satisfaction, commitment and strain. Furthermore, both trust and justice emerged as mediators when combined in tests of multiple mediation.

These results highlight the social-exchange process between employee-organisation and suggest that when employees feel valued and believe that the organisation supports them, they may perceive their senior management as being trustworthy or perceive that organisational policies and practices are fair. In return,

employees may respond with greater organisational commitment and job satisfaction, or a reduced level of psychological strain. Given existing research, it is not surprising that both job satisfaction and organisational commitment appear to be influenced by HR practices. However, it is of interest that psychological strain was also linked negatively to POS, trust in senior management and perceived procedural justice.

### 5.1. Implications for Management

The findings that employee-level perceptions of the implementation of stress-reduction measures was related to lower levels of psychological strain and higher levels of job satisfaction and affective organisational commitment have a number of practical implications. The key implication is that awareness of stress interventions in and of itself, is predictive of important employee outcomes. Hence organisations should invest in promoting the HR strategies and interventions that are implemented. Of particular note is that awareness of stress interventions is related to trust and justice. This effect may occur because the awareness of such interventions enhances employees' perceptions of trust in senior management and the perceived justice of procedures and policies within the organisation. There is a need to explore the employee experience of HR management practices (Boselie et al., 2005) in order to answer the ensuing question of whether it is just awareness of the interventions, or does actual use make a difference?

A third implication is that organisations should also focus on communicating awareness of the strategies as well as putting them in place. Ostroff and Bowen (2000), for example, assert that a robust HR system has salient HR practices that are communicated strongly to employees. They argue that the strength of an HR system is determined in part by whether the processes and outcomes of HR practices are *visible* to employees, whether available information about practices are *clear* to

employees, and the *acceptability* of the practices to employees. This is in line with Conway and Monks (2008, p. 81) who investigated the relationship between HR practices and commitment to change in three Irish health service organisations, and suggest that organisations should attend to the basic HR practices that form the basis of the employment relationship (e.g. communications, staffing, rewards) rather than the more sophisticated HR approaches to managing employees, particularly during times of change when "more 'basic' HR practices come to the fore and are particularly important". It can be speculated that employee awareness of the interventions, regardless of the content of the interventions, makes a positive difference for employees, and in turn, the organisation.

Our findings allow for generalisation beyond a specific company or profession as the majority of our sample were non-academic employees who worked in the diverse occupational roles of professional (e.g. accountant, librarian), clerical / administrative, technical (e.g. computer technician), and service (e.g. cleaners, security) staff. As a result, these findings may assist HR management, both in universities and other organisations, to address issues relating to work stressors and refine current strategies or implement further strategies to create positive work relationships and environments.

### 5.2. Strengths and Limitations

The results should be interpreted in the context of the study's strengths and limitations. This study takes a step in advancing the understanding of positive employee-level outcomes, and its strength lies in the multi-wave sampling. The data were based on a longitudinal population of 869 employees from multiple universities, with little evidence of attrition bias which strengthens the validity of the sample. Our findings allow for generalisation beyond a specific company or profession as the

majority of our sample worked in professional, clerical / administrative, technical, and service roles.

There are limitations that need to be acknowledged. First, psychosocial work factors and health were measured by self-report which may have potentially biased the result. Second, we were unable to establish the reliability of our measure of POS because it was based on a single item. Future research is required to examine the direct relationship between awareness of stress interventions and the Survey of Perceived Organisational Support (SPOS) formulated by Eisenberger et al. (1986) which has been widely used in POS research. While we acknowledge the limitations of single-item measures (e.g. inability to assess psychometric properties, see Nunnally, 1978; and use as a continuous variable in multivariate analyses, see Anderson and Gerbing, 1988), we note that the empirical comparison of single-item versus multiple-item measurement scales by Gardner et al. (1998) found that neither method was empirically better than the other. Indeed, single-item measures of some constructs, such as the measurement of overall job satisfaction, may be superior to summated multiple-item scales. Accordingly, we believe that the single-item measure used in this study did not represent an abstract construct but captured an important aspect of POS in terms of employee awareness of stress-reduction strategies in organisations, and warrants further investigation in applied settings.

In conclusion, the key messsage of this study is that employee awareness of stress interventions is predictive of important and positive employee outcomes, and as a result, organisations should invest in the promotion of those strategies. Of particular note, the awareness of such stress interventions enhances employees' trust in senior management and their perceptions of fair and just procedures in the organisation.

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## 6.3 Discussion

The findings in Study 1 suggest that organisations can attain favourable outcomes if employees perceive that they are well treated in terms of the provision of stress-reduction measures. The reciprocity norm within the social-exchange framework appears to be evident in the employee-organisation relationship in university settings as employee awareness of stress interventions (POS) is associated with benefits for both employees and the organisation in terms of reduced strain, and increased job satisfaction and commitment to the organisation. Hence organisations should invest in promoting the HR strategies and interventions that are implemented.

Of particular note, the awareness of such stress interventions enhances employees' trust in senior management and their perceptions of fair and just procedures in the organisation. These results suggest that POS fostered perceptions of trust in senior management and procedural justice, and in turn, employees responded with lower levels of strain and pro-organisational attitudes of job satisfaction and affective organisational commitment.

Importantly, the exchange between POS and positive work attitudes and the mediation effects of trust and justice may also enhance our understanding of the organisational-attachment process within the social-exchange framework. One explanation for this relationship is that support from the organisation may help an employee's ability to cope with stressors (Brown & Peterson, 1993). According to Eisenberger et al. (2004), the greater the inducements by the employer, the more POS is likely to be enhanced. This also points to the motivational and performance gains that may follow when people feel that they are valued by their organisations. Thus, it appears beneficial for senior management to develop and maintain a spirit of trust and a sense of procedural justice within their organisations.

The findings suggest that trust and justice may co-develop and be used by employees in similar ways, or may act as substitutes for each other. This research has implications for the potential impact of policies developed to promote employee perceptions of fairness, and trust in senior management in order to improve the environment of their workplace. The aforementioned findings may assist HR

management, both in universities and other organisations, to address issues relating to work stressors and refine current strategies or implement further strategies to create positive work relationships and environments.

There were two other important findings in this study: (1) employee levels of job satisfaction can be predicted by both length of employee tenure and staff group status (i.e., academic or non-academic); and (2) staff group was identified as a significant predictor of affective commitment to the organisation and remained a significant predictor of higher levels of commitment when both POS and prior levels of commitment were included as additional predictors in the hierarchical regression analyses.

The following chapter addresses several of the questions which flow from these findings, as Study 2 examines potential differences between staff groups (i.e., academic and non-academic employees), and between groups with differing lengths of organisational tenure, in terms of their relationship to POS and trust in senior management, and perceptions of procedural justice. This examination may assist universities and other organisations to identify potential targets for intervention strategies or targets for the promotion of existing strategies to increase trust and perceptions of procedural justice.

# Chapter 7:
# Study 2: Tenure and Staff Group Differences in Work Attitudes

## 7.1 Overview

As outlined in Chapter 5, the principle of social exchange can explain how employees' levels of well-being and positive work-related attitudes are promoted by POS. The results of the study detailed in Chapter 6 demonstrated that POS (i.e., employee perceptions of the provision of stress-reduction measures) was associated with favourable outcomes for both employees and their university in increased well-being and positive work attitudes.

An important finding obtained in the longitudinal study of POS in the preceding chapter was that employee levels of morale in terms of job satisfaction and affective commitment to their organisation could be reliably predicted by the variables of staff group (i.e., academic, non-academic) and length of organisational tenure. For example, staff group status was found to predict employee levels of job satisfaction and affective commitment to the organisation, whereas tenure remained a significant predictor of higher levels of job satisfaction when both POS and prior levels of job satisfaction were included as additional predictors in the hierarchical regression analyses.

This chapter will interpret these findings in the context of previous research cited in Chapter 5. The results for tenure may be attributed to Herzberg's two-factor theory (Herzberg et al., 1957) in that the association of tenure and age with job satisfaction, was a U-shape relationship, as employees in their early stages of employment usually experienced low job satisfaction due to unfulfilled work expectations. However, when these employees advanced in their careers they gained maturity and work experience which led them to a more realistic level of work expectations, which in turn, led to higher job satisfaction. It is clear that gaining experience at work is an outcome of tenure, and that, work experience is a

requirement for promotion opportunities, and the inherent reward and salary benefits. Indeed, research has showed that longer tenure employees who have been with the organisation for longer periods may develop a more favourable view of their treatment by the organisation (Rhoades & Eisenberger, 2002).

In view of the research evidence discussed in Chapter 5, the demographic characteristics of gender, age, length of organisational tenure, and staff group were entered as control variables in the analyses in Study 1 to reduce the possibility of noise in the analyses. However, in light of the finding that staff group status and tenure were found to predict employee levels of job satisfaction and/or affective commitment to the organisation, the present study will: (1) allow comparisons between academic and non-academic university staff to explore potential occupation-specific associations between POS and work-related attitudes; and (2) allow comparisons between groups with different lengths of tenure to examine any specific associations between POS and attitudinal outcomes. This study seeks to explore those relationships as no research has examined relationships between POS in the positive perceptions of intervention strategies, and job satisfaction, organisational commitment, trust in senior management and perceived procedural justice.

The finding that staff group status predicted employee levels of job satisfaction and affective commitment to the organisation was not surprising given that, as pointed out in Chapter 5, academic and non-academic staff have markedly different functional roles, due to the teaching and research aspects of academic work. Indeed, there is evidence of differences between employee populations working in the university context (see Winefield et al., 2003). For example, in terms of job satisfaction Winefield et al. found that 74% of non-academic staff expressed overall job satisfaction, whereas only 61% of academic staff expressed overall job satisfaction.

Turning to affective organisational commitment, Study 1 (see Chapter 6) also identified staff group as a predictor of affective commitment to the organisation, as it remained a significant predictor of higher levels of affective commitment when both POS and prior levels of commitment were included as additional predictors in the hierarchical regression analyses. In the context of the AUSS research cited in Chapter 4, workplace factors (i.e., trust in senior management, procedural justice, autonomy) were shown to be the best predictors of academics' commitment to their university as

they accounted for 21% of the variance, whereas demographic factors (i.e., occupational level) and individual difference variables (i.e., job involvement, extraversion, negative affectivity, hardiness) accounted only for 3% and 14% of the variance respectively. On the other hand, for non-academic staff, the individual difference variables of job involvement, extraversion, conscientiousness, hardiness, and maladaptive coping were more predictive of commitment than were the workplace factors of trust, justice, and autonomy (Winefield et al., 2002). These results suggest that the roles played by perceived work conditions and individual difference variables in predicting commitment differ between academic and non-academic employees. As a result, HR practices (i.e., reward and incentive practices) and interventions may need to be tailored to take account of these group differences.

## 7.2 Research Questions

Given their diverse functional work roles, it would be of value to university management and HR practitioners to explore potential differences between the two groups of academic and non-academic staff, in relation to POS and positive work-related outcomes as this may identify potential target groups for the promotion of organisational stress-reduction strategies. It would also be of interest to examine possible relationships between length of organisational tenure, POS and employee attitudes as research has found that longer tenured employees may develop a more favourable view of their treatment by the organisation (Rhoades & Eisenberger, 2002). This leads to the following research questions:

*Research Question 1.* Do academic and non-academic staff differ in terms of relationships between POS and work attitudes?

*Research Question 2.* Does length of organisational tenure affect the relation between POS and work attitudes?

## 7.3 Method

### *7.3.1 Participants and Procedure*

Participants and procedure are the same as for Chapter 6.

### *7.3.2 Measures*

Both the Time 1 and Time 2 survey questionnaires (see Appendix D & E respectively) sought demographic information (i.e., age, gender). The following work attitude measures were used in the survey, and each had internal reliabilities of between .69 and .96 (Cronbach's alpha coefficients).

The mean for job satisfaction is based on the total scores, whereas the measures of affective organisational commitment, perceived procedural justice and trust in senior management are based on the item means. Although none of the correlations was high enough to suggest that any of the self-report measures were assessing the same constructs (see Nunnally & Bernstein, 1994), job satisfaction at Time 2 was strongly associated with the Time 2 variables of procedural justice ($r$ = .67) and trust in senior management ($r$ = .57). Organisational commitment at Time 2 was also strongly associated with the Time 2 variable of trust in senior management ($r$ = .56).

***Job Satisfaction.*** The 15-item scale developed by Warr, Cook, and Wall (1979) assessed job satisfaction (e.g., "How satisfied or dissatisfied do you feel with your opportunity to use your abilities?"). Each item was scored on a 7-point Likert scale (1 = *extremely dissatisfied*; 7 = *extremely satisfied*).

***Affective Organisational Commitment.*** Five items from Porter, Steers, Mowday and Boulian's (1974) scale measured affective organisational commitment. An example item is "I really care about the future of this university." Each item was scored on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*).

***Trust in Senior Management.*** An 8-item scale developed from Mayer and Davis (1999) and Butler (1991) measured trust in senior management (e.g., "Senior Management of my University treat staff fairly"). Each item was scored on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*).

***Procedural Justice.*** A 4-item scale developed by Gillespie et al. (2001) measured perceptions of procedural justice (e.g., "Staff performance is fairly appraised"). Each item was scored on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*).

***Perceived Organisational Support***. We used an intervention evaluation component in the Time 2 survey in which university staff were asked: "During the past 3 years has your university undertaken any measures to reduce stress among its employees?" Response options were (1 = *Yes*, 2 = *No*, 3 = *Don't Know*). These options were recoded in a binary format (0 = *No / Don't Know*, 1 = *Yes*) to distinguish between those with a positive awareness of stress-reduction measures and those with negative or neutral perceptions of the measures.

***Length of Organisational Tenure.*** Respondents were asked to complete the number of years that they had worked at the university. The responses were recoded into four tenure groups (0–5 years, 6–10 years, 11–19 years, 20–38 years).

***Staff Group.*** Respondents were asked to state whether they were a member of academic or non-academic staff (1 = *academic*, 2 = *non-academic*).

***Control Variables***. To reduce the possibility of spurious relationships introduced by demographic characteristics, two control variables were entered in all the equations: age, and gender (1 = *male*, 2 = *female*).

### *7.3.3 Analyses*

Hierarchical regression analyses were performed using SPSS Statistics 17.0 software. Preliminary checks were conducted to ensure that there was no violation of the assumptions of multicollinearity, normality, linearity, and homoscedasticity. Two multivariate outliers were identified through Mahalanobis distance with $p < .001$, and were deleted. Listwise deletion of missing data was used in all analyses. As prior levels of the dependent variable (i.e. Time 1 levels of job satisfaction, commitment, trust in senior management, procedural justice) were included as additional predictors in the analysis, tests of the abovementioned relationships are more rigorous as they show that the predictors account for changes in the levels of the dependent variables (Zapf et al., 1996).

## 7.4 Results

The means, standard deviations, internal reliability coefficients and bivariate correlations are displayed in Table 7.1.

**Table 7.1** *Descriptive Statistics and Variable Inter-Correlations*

| Variable | M[a] | SD | α | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Age | 46.50 | 9.24 | — | | | | | | | | | | | | |
| 2. Gender | 0.62 | 0.48 | — | −.15** | | | | | | | | | | | |
| 3. Tenure | 12.08 | 7.34 | — | .46** | −.09* | | | | | | | | | | |
| 4. Group | 1.57 | 0.50 | — | −.19** | .20** | −.07 | | | | | | | | | |
| 5. JS T1 | 66.26 | 13.39 | .87 | −.06 | .13** | −.13** | .18** | | | | | | | | |
| 6. JS T2 | 65.43 | 14.89 | .89 | −.03 | .11** | −.04 | .17** | .63** | | | | | | | |
| 7. OC T1 | 3.49 | 0.69 | .79 | −.01 | .08* | −.09** | .18** | .49** | .34** | | | | | | |
| 8. OC T2 | 3.51 | 0.79 | .84 | −.04 | .10** | −.03 | .19** | .41** | .53** | .62** | | | | | |
| 9. TM T1 | 2.53 | 0.86 | .95 | −.08* | .03 | −.18** | .19** | .55** | .40** | .45** | .40** | | | | |
| 10. TM T2 | 2.64 | 0.93 | .96 | −.12** | .05 | −.14** | .18** | .44** | .57** | .38** | .56** | .59** | | | |
| 11. PJ T1 | 3.06 | 0.67 | .69 | .00 | .03 | −.07* | −.02 | .54** | .42** | .31** | .29** | .41** | .36** | | |
| 12. PJ T2 | 3.09 | 0.82 | .76 | −.01 | −.01 | .03 | .05 | .42** | .67** | .23** | .41** | .33** | .51** | .52** | |
| 13. POS | 0.21 | 0.41 | — | −.03 | .06 | −.04 | .18** | .15** | .24** | .15** | .18** | .16** | .21** | .05 | .15** |

*Note.* $N = 681–869$. JS = Job satisfaction, OC = Organisational commitment, TM = Trust in senior management, PJ = Procedural justice, POS = Perceived organisational support. [a]For JS, item scores were summed. Item scores were averaged for OC, TM and PJ.
*$p < .05$. **$p < .01$. ***$p < .001$.

### *7.4.1 Staff Group and Tenure Effects of POS on Work Attitudes*

The aim of this analysis was to assess the contribution of staff group and tenure on POS controlling for age, gender, tenure, staff group, the interaction between length of organisational tenure and staff group, and Time 1 variable differences. Thus, age, gender, tenure, and staff group were entered into the analysis. In addition, to examine possible interactions between tenure and staff group, a product term was calculated in accordance with the method suggested by Cohen and Cohen (1983) and Jaccard, Turrisi and Wan (1990). This method involved three steps. First, tenure scores were 'centred' (i.e., mean = 0) to reduce the problem of multicollinearity in the subsequent analysis. Second, the centred tenure scores were multiplied by the dummy variable scores for staff group to obtain a product term. Third, this product term was entered into the regression analysis following tenure and staff group. A significant interaction was deemed to have occurred if the addition of this term gave rise to a significant change in $R^2$.

The regression tables display the unstandardized regression coefficients (*B*) and their standard errors, the standardized regression coefficients (β) and adjusted $R^2$ for each step.

**Table 7.2** *Hierarchical Regression Analyses for Relations between POS and Work Attitudes Controlling for Age, Gender, Tenure, Interaction between Tenure and Staff Group, and Time 1 Variables*

| | Step 1 | | | | Step 2 | | | |
|---|---|---|---|---|---|---|---|---|
| Measure | *B* | *SE B* | β | *t* | *B* | *SE B* | β | *t* |
| | | | | Job satisfaction | | | | |
| Age | 0.02 | .05 | 0.02 | 0.46 | 0.02 | 0.05 | 0.01 | 0.30 |
| Gender | 0.83 | .85 | 0.03 | 0.97 | 0.79 | 0.84 | 0.03 | 0.95 |
| Tenure | −0.06 | .18 | −0.03 | −0.30 | −0.04 | 0.18 | −0.02 | −0.24 |
| Staff Group | 1.58 | .84 | 0.05 | 1.87 | 0.93 | 0.84 | 0.03 | 1.11 |
| Tenure x Staff Group | 0.11 | .11 | 0.08 | 0.96 | 0.10 | 0.11 | 0.08 | 0.95 |
| Time 1 Satisfaction | 0.68 | .03 | 0.62 | 22.15*** | 0.66 | 0.03 | 0.60 | 21.66*** |
| POS | | | | | 4.50 | 1.00 | 0.14 | 5.00*** |
| *Adj.* $R^2$ | | | | 0.40 | | | | |
| *F* | | | | 91.03*** | | | | |
| $\Delta R^2$ | | | | | | | | .02 |

| Measure | Step 1 | | | | Step 2 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *B* | *SE B* | β | *t* | *B* | *SE B* | β | *t* | |
| *F* change | | | | | | | | | 25.04*** |
| | | | | Organisational Commitment | | | | | |
| Age | −.02 | .01 | −.04 | −1.27 | −0.02 | .01 | −.04 | −1.32 | |
| Gender | .28 | .22 | .04 | 1.27 | 0.27 | .22 | .03 | 1.23 | |
| Tenure | −.03 | .05 | −.05 | −0.55 | −0.02 | .05 | −.05 | −0.52 | |
| Staff Group | .59 | .22 | .07 | 2.67** | 0.49 | .22 | .06 | 2.19* | |
| Tenure x Staff Group | .03 | .03 | .10 | 1.19 | 0.03 | .03 | .10 | 1.20 | |
| Time 1 Commitment | .70 | .03 | .61 | 22.49*** | 0.68 | .03 | .60 | 22.10*** | |
| POS | | | | | 0.78 | .26 | .08 | 2.98** | |
| *Adj. R*$^2$ | | | | 0.40 | | | | | |
| *F* | | | | 95.36*** | | | | | |
| $\Delta R^2$ | | | | | | | | | .01 |
| *F* change | | | | | | | | | 8.85** |
| | | | | Trust in Senior Management | | | | | |
| Age | −.05 | .03 | −.06 | −1.71 | −0.05 | .03 | −.06 | −1.84 | |
| Gender | .22 | .44 | .01 | 0.50 | 0.16 | .44 | .01 | 0.37 | |
| Tenure | −.12 | .09 | −.11 | −1.25 | −0.11 | .09 | −.11 | −1.18 | |
| Staff Group | .90 | .44 | .06 | 2.03* | 0.61 | .44 | .04 | 1.38 | |
| Tenure x Staff Group | .08 | .06 | .12 | 1.34 | 0.07 | .06 | .12 | 1.29 | |
| Time 1 Trust | .63 | .03 | .57 | 20.01*** | 0.61 | .03 | .56 | 19.58*** | |
| POS | | | | | 2.09 | .52 | .11 | 4.02*** | |
| *Adj. R*$^2$ | | | | 0.35 | | | | | |
| *F* | | | | 77.55*** | | | | | |
| $\Delta R^2$ | | | | | | | | | 0.01 |
| *F* change | | | | | | | | | 16.12*** |
| | | | | Procedural Justice | | | | | |
| Age | −.01 | .01 | −.03 | −0.86 | −0.01 | .01 | −.03 | −0.86 | |
| Gender | −.24 | .23 | −.04 | −1.04 | −0.26 | .23 | −.04 | −1.13 | |
| Tenure | −.06 | .05 | −.14 | −1.31 | −0.06 | .05 | −.13 | −1.18 | |
| Staff Group | .48 | .22 | .07 | 2.16* | 0.38 | .23 | .06 | 1.68 | |
| Tenure x Staff Group | .06 | .03 | .21 | 1.99* | 0.06 | .03 | .20 | 1.91 | |
| Time 1 Justice | .63 | .04 | .53 | 16.24*** | 0.63 | .04 | .53 | 16.12*** | |
| POS | | | | | 0.84 | .27 | .10 | 3.13** | |
| *Adj. R*$^2$ | | | | 0.28 | | | | | |
| *F* | | | | 45.19*** | | | | | |
| $\Delta R^2$ | | | | | | | | | 0.01 |
| *F* change | | | | | | | | | 9.77** |

*Note.* $N$ = 673–869. $\Delta R^2$ = change in $R^2$. POS = Perceived organisational support. $^*p \leq .05$. $^{**}p \leq .01$. $^{***}p \leq .001$.

As can be observed in Table 7.2, the Time 1 levels of the attitudinal outcome variables were predictors of the Time 2 outcomes. Staff group remained a predictor of organisational commitment after the addition of POS in Step 2, whereas staff group was only a significant predictor of trust in senior management at Step 1. In regard to procedural justice, it should be noted that staff group and the interaction between staff group and tenure, predicted procedural justice prior to the addition of POS. In view of these findings, further regression analyses were undertaken to examine differences between academic and non-academic staff in the effect of POS on organisational commitment, and work attitudes.

### *7.4.2 Differences between Academic and Non-Academic Staff in Effect of POS on Work Attitudes*

Hierarchical regression analyses were used to examine differences between academic and non-academic staff in the effect of POS on job satisfaction, organisational commitment, trust in senior management, and procedural justice. In all cases, POS was the independent variable with two levels (*No/Don't Know*, and *Yes*). Age, gender, tenure, and respondents' scores on the relevant Time 1 variables were included in the analyses as control variables at Step 1.

**Table 7.3** *Hierarchical Regression Analyses for Relations between POS and Work Attitudes: Academic Staff*

| | Step 1 | | | | Step 2 | | | |
|---|---|---|---|---|---|---|---|---|
| Measure | *B* | *SE B* | β | *t* | *B* | *SE B* | β | *t* |
| | | | | Job satisfaction | | | | |
| Age | .00 | 0.08 | .00 | 0.04 | −0.01 | 0.08 | −.01 | −0.10 |
| Gender | .20 | 1.11 | .01 | 0.18 | 0.16 | 1.10 | .01 | 0.15 |
| Tenure | .07 | 0.09 | .04 | 0.83 | 0.09 | 0.09 | .05 | 0.97 |
| Time 1 Satisfaction | .72 | 0.04 | .69 | 17.16*** | 0.71 | 0.04 | .68 | 16.71*** |
| POS | | | | | 4.02 | 1.68 | .09 | 2.40* |
| *Adj.* $R^2$ | | | | 0.46 | | | | |
| *F* | | | | 76.34*** | | | | |
| $\Delta R^2$ | | | | | | | | 0.01 |
| *F* change | | | | | | | | 5.71* |
| | | | | Organisational Commitment | | | | |
| Age | −.04 | 0.02 | −.08 | −1.71 | −0.04 | 0.02 | −.09 | −1.74 |
| Gender | .17 | 0.34 | .02 | 0.50 | 0.17 | 0.38 | .02 | 0.50 |

| Measure | Step 1 | | | | | Step 2 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *B* | *SE B* | β | *t* | | *B* | *SE B* | β | *t* | |
| Tenure | .02 | .03 | .04 | 0.85* | | 0.02 | .03 | .05 | 0.91 | |
| Time 1 Commitment | .70 | .05 | .62 | 14.95*** | | 0.69 | .05 | .61 | 14.70*** | |
| POS | | | | | | 0.92 | .52 | .07 | 1.78 | |
| *Adj. $R^2$* | | | | | 0.38 | | | | | |
| *F* | | | | | 58.12*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | 0.01 |
| *F* change | | | | | | | | | | 3.16 |
| | Trust in Senior Management | | | | | | | | | |
| Age | −.06 | .04 | −.06 | −1.28 | | −0.06 | .04 | −.07 | −1.37 | |
| Gender | −.00 | .62 | .00 | −0.00 | | −0.03 | .62 | −.00 | −0.05 | |
| Tenure | −.04 | .05 | −.04 | −0.74 | | −0.03 | .05 | −.03 | −0.66 | |
| Time 1 Trust | .62 | .04 | .60 | 14.02*** | | 0.60 | .05 | .57 | 13.31*** | |
| POS | | | | | | 2.56 | .97 | .11 | 2.66** | |
| *Adj. $R^2$* | | | | | 0.37 | | | | | |
| *F* | | | | | 54.08*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | 0.01 |
| *F* change | | | | | | | | | | 7.06** |
| | Procedural Justice | | | | | | | | | |
| Age | −.01 | .02 | −.02 | −0.39 | | −0.01 | .02 | −.02 | −0.38 | |
| Gender | −.42 | .32 | −.06 | −1.30 | | −0.42 | .32 | −.06 | −1.31 | |
| Tenure | −.01 | .03 | −.02 | −0.27 | | −0.00 | .03 | −.01 | −0.17 | |
| Time 1 Justice | .72 | .06 | .59 | 12.23*** | | 0.72 | .06 | .58 | 12.18*** | |
| POS | | | | | | 0.53 | .48 | .05 | 1.10 | |
| *Adj. $R^2$* | | | | | 0.33 | | | | | |
| *F* | | | | | 37.62*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | 0.01 |
| *F* change | | | | | | | | | | 1.22 |

*Note.* $N$ = 294–372. $\Delta R^2$ = change in $R^2$. POS = Perceived organisational support.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

As can be observed from Table 7.3, the Time 1 level variables of job satisfaction, commitment, trust and justice were predictors of job satisfaction, commitment, trust and justice respectively for academic staff. In addition, tenure was a predictor of organisational commitment at Step 1 only. When POS was added to the analyses at Step 2, its effect was significant for job satisfaction, and trust in senior management, but not for organisational commitment and procedural justice.

**Table 7.4** *Hierarchical Regression Analyses for Relations between POS and Work Attitudes: Non-Academic Staff*

| Measure | Step 1 | | | | | Step 2 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *B* | *SE B* | β | *t* | | *B* | *SE B* | β | *t* | |
| **Job satisfaction** | | | | | | | | | | |
| Age | 0.04 | 0.07 | .03 | 0.59 | | 0.03 | 0.07 | .02 | 0.50 | |
| Gender | 1.45 | 1.26 | .04 | 1.15 | | 1.43 | 1.24 | .04 | 1.15 | |
| Tenure | 0.16 | 0.09 | .07 | 1.78 | | 0.16 | 0.09 | .07 | 1.78 | |
| Time 1 Satisfaction | 0.63 | 0.04 | .55 | 14.55*** | | 0.63 | 0.04 | .55 | 14.55*** | |
| POS | | | | | | 5.41 | 1.26 | .16 | 4.28*** | |
| *Adj.* $R^2$ | | | | | 0.33 | | | | | |
| *F* | | | | | 58.23*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | 0.03 |
| *F* change | | | | | | | | | | 18.30*** |
| **Organisational Commitment** | | | | | | | | | | |
| Age | −0.00 | 0.02 | −.01 | −0.27 | | −0.01 | 0.02 | −.01 | −0.31 | |
| Gender | 0.40 | 0.29 | .05 | 1.35 | | 0.38 | 0.29 | .05 | 1.29 | |
| Tenure | 0.04 | 0.02 | .07 | 1.77 | | 0.04 | 0.02 | .07 | 1.83 | |
| Time 1 Commitment | 0.69 | 0.04 | .60 | 16.74*** | | 0.68 | 0.04 | .59 | 16.44*** | |
| POS | | | | | | 0.72 | 0.30 | .09 | 2.42* | |
| *Adj.* $R^2$ | | | | | 0.36 | | | | | |
| *F* | | | | | 71.27*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | 0.01 |
| *F* change | | | | | | | | | | 5.86*** |
| **Trust in Senior Management** | | | | | | | | | | |
| Age | −.04 | .03 | −.05 | −1.15 | | −0.04 | 0.03 | −.05 | −1.25 | |
| Gender | .43 | .62 | .03 | 0.69 | | 0.35 | 0.62 | .02 | 0.57 | |
| Tenure | .03 | .04 | .03 | 0.77 | | 0.03 | 0.04 | .03 | 0.79 | |
| Time 1 Trust | .63 | .04 | .56 | 14.31*** | | 0.62 | 0.04 | .55 | 14.18*** | |
| POS | | | | | | 1.91 | 0.63 | .12 | 3.05** | |
| *Adj.* $R^2$ | | | | | 0.30 | | | | | |
| *F* | | | | | 52.44*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | 0.01 |
| *F* change | | | | | | | | | | 9.32** |
| **Procedural Justice** | | | | | | | | | | |
| Age | −.01 | .02 | −.03 | −0.63 | | −0.01 | 0.02 | −.03 | −0.64 | |
| Gender | −.11 | .32 | −.02 | −0.34 | | −0.15 | 0.32 | −.02 | −0.48 | |
| Tenure | .05 | .02 | .12 | 2.37* | | 0.05 | 0.02 | .12 | 2.46* | |
| Time 1 Justice | .57 | .05 | .49 | 10.99*** | | 0.56 | 0.05 | .48 | 10.83*** | |

| Measure | Step 1 | | | | Step 2 | | | |
|---|---|---|---|---|---|---|---|---|
| | *B* | *SE B* | β | *t* | *B* | *SE B* | β | *t* |
| POS | | | | | 1.00 | .33 | .14 | 3.04** |
| *Adj. R*$^2$ | | | | 0.24 | | | | |
| *F* | | | | 31.07*** | | | | |
| $\Delta R^2$ | | | | | | | | 0.02 |
| *F* change | | | | | | | | 9.24** |

*Note.* $N$ = 379–497. $\Delta R^2$ = change in $R^2$. POS = Perceived organisational support.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

For non-academic staff, Table 7.4 shows that the Time 1 levels of job satisfaction, commitment, trust and justice were predictors of the Time 2 levels of job satisfaction, organisational commitment, trust in senior management, and procedural justice respectively. Furthermore, tenure remained a predictor of procedural justice for non-academic staff. However, unlike the results for academic staff, the effect of POS was significant for the four work attitudinal outcomes.

### *7.4.3 Tenure Group Differences in POS*

Hierarchical regression analyses were used to examine any tenure group differences in the inter-relationships between POS and employee levels of job satisfaction, organisational commitment, trust in senior management, and procedural justice. In all cases, POS was the independent variable with two levels (*No/Don't Know*, and *Yes*). Age, gender, staff group, and respondents' scores on the relevant Time 1 variables were included in the analyses as control variables at Step 1.

Respondents completed the number of years that they had worked at the university and their responses were recoded into four tenure groups (0–5 years, 6–10 years, 11–19 years, 20–38 years). Each of these samples met the sample size criteria recommended by Tabachnick and Fidell (2001, p. 117) for multiple regression analyses. According to Tabachnick and Fidell's formula ($N > 50 + 8m$ (m = number of independent variables), and taking into account the five independent variables used in the analyses, 90 cases were required for a reliable equation.

**Table 7.5** *Hierarchical Regression Analyses for Relations between POS and Work Attitudes: Length of Tenure 0–5 years*

| Measure | Step 1 | | | | | Step 2 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *B* | *SE B* | β | *t* | | *B* | *SE B* | β | *t* | |
| | | | | | Job satisfaction | | | | | |
| Age | 0.03 | 0.11 | .02 | 0.25 | | 0.00 | 0.11 | .00 | 0.03 | |
| Gender | 1.81 | 2.14 | .06 | 0.85 | | 2.12 | 2.11 | .07 | 1.01 | |
| Staff Group | -2.76 | 2.07 | -.10 | -1.34 | | -3.33 | 2.06 | -.11 | -1.62 | |
| Time 1 Satisfaction | 0.55 | 0.09 | .44 | 6.24*** | | 0.53 | 0.09 | .43 | 6.18*** | |
| POS | | | | | | 5.63 | 2.44 | .16 | 2.31* | |
| *Adj.* $R^2$ | | | | | 0.19 | | | | | |
| *F* | | | | | 10.48*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | 0.03 |
| *F* change | | | | | | | | | | 5.32* |
| | | | | | Organisational Commitment | | | | | |
| Age | -.01 | 0.03 | -.01 | -0.21 | | -.01 | 0.03 | -.02 | -0.31 | |
| Gender | -.56 | 0.53 | -.07 | -1.06 | | -.53 | 0.53 | -.07 | -1.02 | |
| Staff Group | -.39 | 0.51 | -.05 | -0.77 | | -.45 | 0.51 | -.06 | -0.89 | |
| Time 1 Commitment | .65 | 0.08 | .53 | 7.88*** | | .65 | 0.08 | .53 | 7.87*** | |
| POS | | | | | | .56 | 0.60 | .06 | 0.94 | |
| *Adj.* $R^2$ | | | | | 0.26 | | | | | |
| *F* | | | | | 15.97*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | .00 |
| *F* change | | | | | | | | | | .87 |
| | | | | | Trust in Senior Management | | | | | |
| Age | −.03 | 0.05 | −.04 | −0.57 | | −0.04 | 0.05 | −.05 | −0.66 | |
| Gender | −.56 | 1.08 | −.04 | −0.52 | | −0.54 | 1.08 | −.03 | −0.50 | |
| Staff Group | −.38 | 1.04 | −.03 | −0.04 | | −0.50 | 1.04 | −.03 | −0.48 | |
| Time 1 Trust | .61 | 0.08 | .51 | 7.54*** | | 0.60 | 0.08 | .51 | 7.40*** | |
| POS | | | | | | 1.17 | 1.25 | .06 | 0.94 | |
| *Adj.* $R^2$ | | | | | 0.25 | | | | | |
| *F* | | | | | 14.73*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | .00 |
| *F* change | | | | | | | | | | .88 |
| | | | | | Procedural Justice | | | | | |
| Age | −.01 | .03 | −.01 | −0.16 | | −0.01 | 0.03 | −.04 | −0.40 | |
| Gender | −.83 | .60 | −.12 | −1.40 | | −0.79 | 0.59 | −.11 | −1.34 | |
| Staff Group | −.80 | .58 | −.12 | −1.38 | | −0.88 | 0.58 | −.13 | −1.53 | |
| Time 1 Justice | .66 | .14 | .41 | 4.85*** | | 0.64 | 0.14 | .40 | 4.76*** | |

| Measure | Step 1 | | | | Step 2 | | | |
|---|---|---|---|---|---|---|---|---|
| | *B* | *SE B* | β | *t* | *B* | *SE B* | β | *t* |
| POS | | | | | 1.30 | .65 | .17 | 2.00* |
| *Adj. R*$^2$ | | | | 0.16 | | | | |
| *F* | | | | 6.70*** | | | | |
| $\Delta R^2$ | | | | | | | | 0.03 |
| *F* change | | | | | | | | 3.99* |

*Note.* $N$ = 120–175. $\Delta R^2$ = change in $R^2$. POS = Perceived organisational support.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

For university staff with five or fewer years of organisational tenure, Table 7.5 shows that there were significant positive relationships (albeit small) between POS in the awareness of stress-reduction interventions, and job satisfaction and perceived procedural justice. POS was identified as a predictor of higher levels of job satisfaction and perceptions of procedural justice when prior levels of job satisfaction and justice respectively were included as additional predictors in the hierarchical regression analyses. For all attitudinal outcomes, the Time 1 level of the dependent variable was a predictor of the Time 2 attitudinal outcome.

**Table 7.6** *Hierarchical Regression Analyses for Relations between POS and Work Attitudes: Length of Tenure 6–10 years*

| Measure | Step 1 | | | | | Step 2 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *B* | *SE B* | β | *t* | | *B* | *SE B* | β | *t* | |
| **Job satisfaction** | | | | | | | | | | |
| Age | -0.01 | 0.09 | -.00 | -0.05 | | -0.00 | 0.09 | .00 | -0.02 | |
| Gender | 1.77 | 1.65 | .06 | 1.08 | | 1.43 | 1.61 | .05 | 0.89 | |
| Staff Group | 3.67 | 1.55 | .12 | 2.38* | | 2.55 | 1.55 | .08 | 1.65 | |
| Time 1 Satisfaction | 0.68 | 0.06 | .62 | 12.36*** | | 0.66 | 0.05 | .60 | 12.30*** | |
| POS | | | | | | 6.12 | 1.75 | .17 | 3.49** | |
| *Adj.* $R^2$ | | | | | 0.42 | | | | | |
| *F* | | | | | 45.12*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | 0.03 |
| *F* change | | | | | | | | | | 12.17** |
| **Organisational Commitment** | | | | | | | | | | |
| Age | −0.01 | 0.02 | −.03 | −0.58 | | −0.01 | 0.02 | −.03 | −0.51 | |
| Gender | 0.83 | 0.45 | .10 | 1.87 | | 0.77 | 0.44 | .09 | 1.77 | |
| Staff Group | 1.35 | 0.42 | .17 | 3.20** | | 1.10 | .43 | .14 | 2.57** | |
| Time 1 Commitment | 0.57 | 0.06 | .51 | 9.75*** | | 0.56 | .06 | .50 | 9.56*** | |
| POS | | | | | | 1.32 | .49 | .14 | 2.70** | |
| *Adj.* $R^2$ | | | | | 0.34 | | | | | |
| *F* | | | | | 33.91*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | 0.02 |
| *F* change | | | | | | | | | | 7.31** |
| **Trust in Senior Management** | | | | | | | | | | |
| Age | −0.07 | .04 | −.08 | −1.58 | | −0.07 | .04 | −.08 | −1.62 | |
| Gender | −0.28 | .81 | −.02 | −0.35 | | −0.58 | .78 | −.04 | −0.74 | |
| Staff Group | 1.58 | .78 | .11 | 2.03* | | 0.85 | .76 | .06 | 1.11 | |
| Time 1 Trust | 0.62 | .06 | .56 | 10.60*** | | 0.61 | .06 | .55 | 10.87*** | |
| POS | | | | | | 3.94 | .86 | .24 | 4.60*** | |
| *Adj.* $R^2$ | | | | | 0.35 | | | | | |
| *F* | | | | | 34.08*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | 0.05 |
| *F* change | | | | | | | | | | 21.17*** |
| **Procedural Justice** | | | | | | | | | | |
| Age | −0.04 | .03 | −.10 | −1.52 | | −0.04 | .03 | −.09 | −1.44 | |
| Gender | 0.04 | .47 | .01 | 0.09 | | 0.01 | .47 | .00 | 0.02 | |

| Measure | Step 1 | | | | | Step 2 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *B* | *SE B* | β | *t* | | *B* | *SE B* | β | *t* | |
| Staff Group | 0.89 | .43 | .13 | 2.06* | | 0.80 | .44 | .12 | 1.79 | |
| Time 1 Justice | 0.60 | .07 | .50 | 8.00*** | | 0.59 | .08 | .49 | 7.90*** | |
| POS | | | | | | 0.47 | .52 | .06 | 0.91 | |
| *Adj. R*$^2$ | | | | | 0.25 | | | | | |
| *F* | | | | | 17.53*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | .00 |
| *F* change | | | | | | | | | | .83 |

*Note.* $N$ = 199–254. $\Delta R^2$ = change in $R^2$. POS = Perceived organisational support.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

Table 7.6 shows that there were significant positive relationships between POS in the awareness of stress-reduction interventions, and job satisfaction, organisational commitment and trust in senior management for employees with six to ten years length of organisational tenure. POS was a predictor of higher levels of job satisfaction, commitment and perceptions of trust in senior management when prior levels of those respective variables were included as additional predictors in the analyses. For all attitudinal outcomes, the Time 1 level of the dependent variable was a predictor of the Time 2 outcome. Of particular note, staff group (i.e., being a member of non-academic staff) was a predictor of affective commitment to the organisation and remained a predictor of higher levels of commitment when both POS and prior levels of commitment were included as additional predictors in the analyses.

**Table 7.7** *Hierarchical Regression Analyses for Relations between POS and Work Attitudes: Length of Tenure 11–19 years*

| Measure | Step 1 | | | | | Step 2 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *B* | *SE B* | β | *t* | | *B* | *SE B* | β | *t* | |
| | | | | | Job satisfaction | | | | | |
| Age | 0.07 | 0.08 | .04 | 0.78 | | 0.06 | 0.08 | .03 | 0.73 | |
| Gender | -0.34 | 1.30 | -.01 | -0.26 | | -0.39 | 1.29 | -.01 | -0.30 | |
| Staff Group | 1.96 | 1.33 | .07 | 1.48 | | 1.56 | 1.32 | .06 | 1.18 | |
| Time 1 Satisfaction | 0.70 | 0.05 | .65 | 14.28*** | | 0.67 | 0.05 | .63 | 13.79*** | |
| POS | | | | | | 4.09 | 1.60 | .12 | 2.56** | |
| *Adj. R*$^2$ | | | | | 0.44 | | | | | |
| *F* | | | | | 61.75*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | 0.01 |

| Measure | Step 1 | | | | | Step 2 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *B* | *SE B* | β | *t* | | *B* | *SE B* | β | *t* | |
| *F* change | | | | | | | | | | 6.56** |
| | | | | Organisational Commitment | | | | | | |
| Age | -.02 | .02 | -.05 | -1.07 | | -.02 | .02 | -.05 | -1.03 | |
| Gender | .23 | .35 | .03 | 0.64 | | .20 | .35 | .03 | 0.58 | |
| Staff Group | .39 | .36 | .05 | 1.09 | | .34 | .36 | .04 | 0.95 | |
| Time 1 Commitment | .76 | .05 | .66 | 15.12*** | | .75 | .05 | .65 | 14.49*** | |
| POS | | | | | | .48 | .43 | .05 | 1.13 | |
| *Adj.* $R^2$ | | | | | 0.45 | | | | | |
| *F* | | | | | 67.19*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | 0.00 |
| *F* change | | | | | | | | | | 1.28 |
| | | | | Trust in Senior Management | | | | | | |
| Age | -.04 | .05 | -.04 | -0.76 | | -0.04 | .05 | -.04 | -0.75 | |
| Gender | .72 | .75 | .05 | 0.96 | | 0.64 | .74 | .04 | 0.86 | |
| Staff Group | .59 | .77 | .04 | 0.77 | | 0.34 | .77 | .02 | 0.44 | |
| Time 1 Trust | .62 | .05 | .58 | 11.97*** | | 0.60 | .05 | .55 | 11.40*** | |
| POS | | | | | | 2.18 | .90 | .12 | 2.43* | |
| *Adj.* $R^2$ | | | | | 0.34 | | | | | |
| *F* | | | | | 38.46*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | 0.01 |
| *F* change | | | | | | | | | | 5.91* |
| | | | | Procedural Justice | | | | | | |
| Age | .00 | .02 | -.00 | -0.03 | | .00 | .02 | .00 | 0.02 | |
| Gender | -.50 | .36 | -.08 | -1.39 | | -.52 | .36 | -.08 | -1.47 | |
| Staff Group | .58 | .36 | .09 | 1.63 | | .51 | .36 | .08 | 1.42 | |
| Time 1 Justice | .61 | .06 | .54 | 9.80*** | | .60 | .06 | .53 | 9.68*** | |
| POS | | | | | | .80 | .43 | .10 | 1.87 | |
| *Adj.* $R^2$ | | | | | 0.28 | | | | | |
| *F* | | | | | 24.65*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | 0.01 |
| *F* change | | | | | | | | | | 3.49 |

*Note.* $N$ = 241–306. $\Delta R^2$ = change in $R^2$. POS = Perceived organisational support.

*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

For employees with 11 to 19 years of tenure, Table 7.7 shows that POS was a predictor of higher levels of job satisfaction and perceptions of trust in senior

management when prior levels of those respective variables were included as additional predictors in the analyses. For all work-attitude outcomes, the Time 1 level of the dependent variable was a predictor of the Time 2 outcome.

**Table 7.8** *Hierarchical Regression Analyses for Relations between POS and Work Attitudes: Length of Tenure 20–38 years*

| | Step 1 | | | | | Step 2 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Measure | *B* | *SE B* | β | *t* | | *B* | *SE B* | β | *t* | |
| | | | | | Job satisfaction | | | | | |
| Age | 0.11 | 0.18 | .04 | 0.59 | | 0.10 | 0.18 | .03 | 0.52 | |
| Gender | -1.47 | 2.11 | -.05 | -0.70 | | -1.41 | 2.11 | -.04 | -0.67 | |
| Staff Group | 2.40 | 2.30 | .07 | 1.05 | | 2.16 | 2.32 | .07 | 0.93 | |
| Time 1 Satisfaction | 0.83 | 0.08 | .73 | 11.04*** | | 0.81 | 0.08 | .72 | 10.66*** | |
| POS | | | | | | 2.34 | 2.81 | .05 | 0.83 | |
| *Adj.* $R^2$ | | | | | 0.54 | | | | | |
| *F* | | | | | 37.05*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | .00 |
| *F* change | | | | | | | | | | .70 |
| | | | | | Organisational Commitment | | | | | |
| Age | -.06 | .05 | -.08 | -1.26 | | -.06 | .05 | -.08 | -1.28 | |
| Gender | .78 | .53 | .09 | 1.47 | | .78 | .53 | .09 | 1.47 | |
| Staff Group | .49 | .58 | .06 | 0.85 | | .47 | .59 | .05 | 0.80 | |
| Time 1 Commitment | .78 | .07 | .70 | 11.50*** | | .78 | .07 | .70 | 11.44*** | |
| POS | | | | | | .24 | .71 | .02 | 0.34 | |
| *Adj.* $R^2$ | | | | | 0.55 | | | | | |
| *F* | | | | | 40.78*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | .00 |
| *F* change | | | | | | | | | | .12 |
| | | | | | Trust in Senior Management | | | | | |
| Age | -0.11 | 0.09 | -.09 | -1.19 | | -0.11 | 0.10 | -.08 | -1.15 | |
| Gender | 0.70 | 1.07 | .05 | 0.65 | | 0.69 | 1.07 | .04 | 0.64 | |
| Staff Group | 1.65 | 1.17 | .11 | 1.41 | | 1.79 | 1.19 | .12 | 1.51 | |
| Time 1 Trust | 0.68 | 0.07 | .62 | 9.12*** | | 0.68 | 0.08 | .63 | 9.14*** | |
| POS | | | | | | -1.07 | 1.44 | -.05 | -0.74 | |
| *Adj.* $R^2$ | | | | | 0.43 | | | | | |
| *F* | | | | | 25.04*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | .00 |
| *F* change | | | | | | | | | | .55 |

| Measure | Step 1 | | | | | Step 2 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *B* | *SE B* | β | *t* | | *B* | *SE B* | β | *t* | |
| | | | | | Procedural Justice | | | | | |
| Age | -.00 | .05 | -.01 | -0.06 | | -.00 | .05 | -.01 | -0.08 | |
| Gender | .15 | .51 | .02 | 0.30 | | .17 | .51 | .02 | 0.33 | |
| Staff Group | .99 | .55 | .14 | 1.80 | | .89 | .56 | .13 | 1.59 | |
| Time 1 Justice | .74 | .08 | .67 | 9.47*** | | .74 | .08 | .67 | 9.48*** | |
| POS | | | | | | .73 | .74 | .07 | 0.99 | |
| *Adj.* $R^2$ | | | | | 0.46 | | | | | |
| *F* | | | | | 24.35*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | .01 |
| *F* change | | | | | | | | | | .98 |

*Note.* $N$ = 113–134. $\Delta R^2$ = change in $R^2$. POS = Perceived organisational support.

*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

For university employees with 20 to 38 years of organisational tenure, Table 7.8 shows that there were no relationships between POS in the awareness of stress-reduction interventions, and job satisfaction, commitment to the organisation, trust in senior management, or procedural justice. However, the Time 1 level of the dependent variable was a predictor of the respective Time 2 attitudinal outcome.

## 7.5 Discussion

The present study examined the inter-relationships between length of organisational tenure, staff group, POS (in the positive perceptions of intervention strategies) and job satisfaction and other positive attitudinal outcomes. First, the study examined the contribution of staff group and tenure on POS controlling for age, gender, the interaction between length of organisational tenure and staff group, and Time 1 variable differences. As expected, the study found that being a member of non-academic staff was a predictor of organisational commitment after the addition of POS. Whilst there were no interactions between length of tenure and staff group on POS for any of the attitudinal outcomes, it should be noted that being a member of non-academic staff, and the interaction between staff group and tenure, were predictors of procedural justice prior to the addition of POS. In view of this finding, further research examining the predictors of procedural justice is required to unpack the effects of these demographic variables.

Further regression analyses examined any staff group differences in the impact of POS on the levels of job satisfaction, organisational commitment, trust in senior management, and procedural justice. For academic staff, POS was a predictor of both job satisfaction and trust in senior management. This finding is in line with the literature on POS and social-exchange theory reviewed in Chapter 5, as a body of job satisfaction research, including a recent meta-analytic review by Riggle et al. (2009) found that POS has a strong, positive effect on job satisfaction. Indeed, Rhoades and Eisenberger (2002, p. 701) propose that "POS should contribute to overall job satisfaction by meeting socio-emotional needs, increasing performance-reward expectancies, and signaling the availability of aid when needed". Furthermore, as outlined in Chapter 6, trust evolves over time through the repeated interactions of values and attitudes within the exchange relationship between employee-organisation (Jones & George, 1998), so this result is consistent with research by Whitener (2001) that POS was related to trust in management.

However, the results show significant differences between academic and non-academic staff in terms of relationships between POS and positive attitudinal outcomes. For non-academic staff, length of organisational tenure was a predictor of procedural justice which suggests that perceptions of procedural justice increase the longer that non-academic staff work at the university. This is consistent with existing research showing that longer tenure employees who have been with the organisation for longer periods may develop a more favourable view of their treatment by the organisation (Rhoades & Eisenberger, 2002). Similar to the results for academic staff, POS was a predictor of job satisfaction and trust in senior management. However, for non-academic staff, POS was also a predictor of organisational commitment, and procedural justice. This finding is in line with previous research that has indicated that academic respondents to the AUSS reported more adverse experiences than non-academic respondents (Winefield et al., 2002; Winefield et al., 2003; Winefield, T., et al., 2008; Winefield, A., et al., 2008). Indeed, the AUSS showed that academic staff reported less organisational commitment, job satisfaction and trust in senior management compared to non-academic staff (Winefield et al., 2002).

Turning to the results for employees' length of organisational tenure, in regard to university staff with five or less years of tenure, POS was a predictor of higher

levels of job satisfaction and perceptions of procedural justice even when prior levels of job satisfaction and justice respectively were included as additional predictors in the hierarchical regression analyses. For employees with six to ten years of tenure, POS was a predictor of higher levels of job satisfaction, commitment and perceptions of trust in senior management. Of particular note, being a member of non-academic staff with between six to ten years of tenure was a predictor of affective commitment to the organisation and remained a predictor of higher levels of commitment when both POS and prior levels of commitment were included as additional predictors. In regard to employees with 11 to 19 years of tenure, POS predicted higher levels of job satisfaction and perceptions of trust in senior management. There were no relationships between POS and job satisfaction, commitment to the organisation, trust in senior management, or procedural justice for employees with 20 to 38 years of organisational tenure.

In sum, employees' length of organisational tenure did affect the relation between POS and attitudinal outcomes. Across the tenure groups, POS (in the perceived implementation of stress intervention strategies) predicted: (1) procedural justice for employees with five or less years of tenure; (2) job satisfaction for employees with 0–9 years of tenure; (3) trust in senior management for employees with 6–19 years of tenure; and (4) commitment to the organisation for employees with tenure for 6–10 years. These results suggest that employees working at the university for an intermediate period of time such as 6–10 years had the most positive perceptions of their organisation in terms of organisational support, job satisfaction, trust, and commitment, whereas employees with 20–38 years of tenure had the least positive perceptions.

It is clear from our results that the positive perception of stress-reduction intervention strategies implemented within university workplaces appear to enhance employee job satisfaction, trust in senior management, commitment to the organisation and procedural justice. The results of this study emphasise the importance of using a longitudinal design and multiple regression analyses that incorporate the Time 1 levels of the dependent variables in order to examine the links from demographic characteristics such as staff group and length of tenure, and organisational resources such as POS, to work-related attitudes. Although the effect sizes for the aforementioned relationships were small, it is reasonable to assume that

POS may have positively influenced these attitudes. Whilst causation cannot be inferred, these findings suggest a link that warrants further investigation.

These results have implications for organisations and management, particularly university management as they identify potential target groups or areas for the promotion of stress-reduction strategies. The findings suggest that management may need to implement new strategies and/or promote existing stress-management and/or reduction strategies to specific targets groups such as academic staff, and employees who are either new to the university or those who have been working for the organisation for longer periods of time, to ensure that those employees are aware of organisational strategies to promote employee well-being and morale within university environments.

Study 3 in the following chapter continues to examine work attitudinal outcomes by focusing on procedural justice and examining the factors that predict procedural justice in the university context. As outlined in Chapter 4, specific strategies to enhance employee perceptions of procedural justice were recommended in light of the findings of the Time 1 AUSS (Winefield et al., 2002). Given that justice perceptions help to shape the employee-employer relationship and have important consequences for attitudes such as job satisfaction, affective organisational commitment, and trust, it would be of value to investigate what types of workplace, demographic or individual characteristics predict procedural justice. As in the present study, the next study aims to identify any potential differences between academic and non-academic employees who hold vastly different roles within the university context. This examination may assist organisations to identify potential targets for strategies to enhance employee-level perceptions of the fairness of organisational policies and procedures.

The chapter begins with an overview of ethics, and the prominent ethical theory of deontology which is related to the psychological contract between employee and employer, in order to understand what types of factors individuals perceive to be fair and just. The chapter then focuses on a longitudinal examination of the factors that predict employee perceptions of procedural justice in the university context.

# Chapter 8:
# Study 3 – Predictors of Procedural Justice

> A good will is good not because of what it effects or accomplishes, nor because of its fitness to attain some proposed end; it is good only through its willing, i.e. good in itself.
>
> Immanuel Kant, *Grounding for the Metaphysics of Morals*[3]

## 8.1 Overview

The results of both the preceding studies show that the reciprocity norm within the social-exchange framework appears to be evident in the employee-organisation relationship in university settings (see Chapter 5 for a review of the literature on social-exchange theory). The findings suggest that universities and other organisations can attain favourable outcomes for both employees and the organisation (i.e., reduced employee-levels of strain, and increased employee-levels of job satisfaction and organisational commitment), if employees perceive that they are well treated in terms of the provision of stress-reduction measures. Of particular note, the awareness of such stress interventions appears to enhance employees' trust in senior management and their perceptions of fair and just procedures in the organisation. These results emphasise the importance of increasing trust and fair procedures, and targeting them to specific staff and tenure groups, in order to promote employee well-being, and enhance job satisfaction and affective organisational commitment.

The concept of organisational justice was discussed in Chapter 5, and this thesis chose to focus specifically on procedural justice as prior research suggests that procedural justice rather than distributive or relational justice is more strongly related

[3]Immanuel Kant, *Grounding for the Metaphysics of Morals*, translated by James W. Ellington (Indianapolis, IN Hackett, 1981, cf. Driver, 2007, p. 80).

to trust ( Lewicki, Wiethoff, & Tomlinson, 2005) and attitudes such as organisational commitment (see Colquitt et al., 2001). Chapter 5 defined procedural justice as referring to how decisions affecting employees are made and the outcomes of those decisions (Greenberg, 1994). Procedural justice perceptions help to shape employees' relationships with their employers (Folger & Cropanzano, 1998) and as a result, have important consequences for employee attitudes such as job satisfaction, organisational commitment and trust in management (Folger & Konovsky, 1989) and behaviours such as organisational citizenship behaviour where employees exceed their explicitly required work responsibilities (Konovsky, 2000), in addition to employee turnover intentions (Ambrose & Cropanzano, 2003).

Given that employee perceptions of procedural justice help to shape the employee-employer relationship, it would be of value to focus specifically on employee perceptions of procedural justice to investigate what types of workplace, demographic or individual characteristics predict procedural justice. This study will attempt to bridge gaps in the literature as an improved knowledge of these characteristics may enhance the understanding of the organisational-attachment process, and the benefits of developing and/or maintaining a spirit of trust and a sense of procedural justice within organisations. Indeed, within the university context, results from the first wave of the AUSS reported in Chapter 4 showed that perceived procedural justice was identified as a key predictor of stress (see Winefield et al., 2002). The importance of examining the ethical issues of organisational stress interventions was noted by Dewe (1994, p. 23) as he proposed that the development and evaluation of organisational interventions "appears to be hampered by issues of power, control and ethics".

As perceptions of unfairness have been associated with important outcomes, including increased intentions to leave the organisation (Colquitt et al., 2001), the implementation of fair organisational policies and processes, enhances procedural justice. The justice literature outlined in Chapter 5, emphasises the importance of increasing justice via fair procedures to encourage reciprocity from employees and the subsequent benefits for organisations, particularly in promoting commitment to the organisation and encouraging employee trust. Procedural justice also has an ethical component due to the mutual exchange process inherent in the psychological contract between the employee and the employer. In order to determine the specific factors

that may predict employees' perceptions of procedural justice in the university context, it is of value to examine procedural justice within the concept of ethics to understand what defines a procedure as fair.

This chapter begins with an overview of ethics, which includes a brief account of Immanuel Kant's deontological theory, a discussion of prescriptive ethics and the foundations of ethical opinions, and the relationship between ethical principles, the psychological contract, and procedural justice. The chapter then focuses on a longitudinal examination of the factors that predict employee perceptions of procedural justice in the university context.

## 8.2 Introduction

### *8.2.1 Ethics*

The Macquarie Dictionary defines ethics as "a system of moral principles, by which human actions and proposals may be judged good or bad, or right or wrong" (Delbridge, 2001, p. 378). Hence, ethics identifies, organises, examines and justifies human acts by applying certain principles to determine the right thing to do in specific circumstances. Some of the chief values in contemporary approaches to ethics are autonomy, responsibility, care, and justice (May, Collins-Chobanian, & Wong, 1998). May and colleagues state that autonomy refers to individuals being true to their principles and acting in the ways that they have chosen. Responsibility includes both a personal and social orientation as it concerns accountability for the consequences that individuals have explicity and directly caused, and includes both the actions that they have explicity done and what they have failed to do. Care refers to partiality, particularly to those who cannot protect themselves, or to those individuals with whom they have interpersonal relationships. Like responsibility, justice has a personal and social orientation as it refers to giving each individual their due on the basis of that individual's legitimate rights. Those rights include contractual rights between two equal parties, and the fair distribution of goods and services in a society.

Employee voice is an ethical consideration in the employee-employer exchange process as employees' participation in workplace processes may be seen as an acceptance of their rights at work (Provis, 1995). According to Budd (2004), the rights and responsibilities of employees and employers extend beyond economic

concerns such as productivity and competitiveness as employment relationships require fair treatment, equity, and voice for employees. Psychological contract theory is based on the reciprocal exchange of obligations between the employee-employer and the perceived level to which obligations are fulfilled, so any discrepancy between what the organisation promises and what it provides, establishes the basis on which employees reciprocate (Coyle-Shapiro & Conway, 2005). Accordingly, perceptions of fair treatment are critical to the continuation of relational psychological contracts (Rousseau & Parks, 1992) whereas, violation of a psychological contract raises issues of procedural justice (Lind & Tyler, 1988) and ethical considerations in perceived contract violations.

Robinson and Morrison (1995), for example, examined the relationship between violation of an employee's psychological contract and civic virtue behaviours (i.e., participating in and being involved with the life of the company) in a three-wave longitudinal study. They found that employees were less likely *to engage* in civic virtue behaviour if they perceived that their employer did not fulfil their obligations. As the research literature highlights the positive relationships between fulfilled psychological contracts and satisfaction with organisation, jobs and leaders; the positive work-related outcomes of organisational commitment, trust, and organisational citizenship behaviour; and the negative relationship with turnover intentions (Coyle-Shapiro & Conway, 2005; Masterson et al., 2000), psychological contracts are clearly of importance to the employee-employer relationship. Indeed, employees who perceive procedural justice as highly discretionary and controlled by management (Rhoades & Eisenberger, 2002) may view actions taken by organisations to increase employee perceptions of justice as an indication of care and concern for their well-being. This leads into the deontological concerns of procedural justice that involve treating employees with honesty, loyalty and respect.

### *8.2.2 Deontology*

Deontological theories view duty as a morally relevant feature with no reference to consequences. Indeed, the acclaimed deontologist, Kant argued that "morality is a matter of doing one's duty, regardless of consequences, and that duty itself is determined not by reference to consequences but by reference to consistency and the requirements of rationality" (Cohen, 2004, p. 41). For Kant, the pure moral

law was related to duty and was independent of feelings and inclinations (Singer, 1994). An example of a deontological principle is *The Golden Rule* of "Do unto others as you would have them do unto you" which is a gauge for correct conduct regardless of the consequences, as an individual performs an act for its intrinsic value and not for its consequences (Cohen, 2004). For example, suppose that Jean makes a promise to her friend Carol to help her write a job application and find suitable employment. According to the deontological approach, Jean fulfils this promise because she made this promise, and not because of any consequences and/or benefits to her in fulfilling the promise. Hence, the rightness of an act depends on that act being a matter of keeping a previous promise (i.e., the promise should be kept because the promise was made) and this obligates the individual to keep the promise. Thus, in deontological moral systems, the moral principles are separated from any consequences that may occur by following those principles. Psychological contracts are linked to deontological concerns such as honesty and loyalty in that it is an employee's duty to carry out their work diligently without benefits or consequences, and it is an employer's duty to treat employees with respect. This leads into the concept of prescriptive ethics.

### *8.2.3 Prescriptive Ethics*

According to Cohen (2004, p. 148) prescriptive ethics prescribes behaviour or practices and refers to "how people *should* behave, and what is the *right* thing to do". These moral oughts occur at three levels of generality. The first level are general principles which seek to guide an individual's actions (Singer, 1994), and are the general overarching moral principles about the standard for right conduct and moral evaluation (Driver, 2007). On the second level are prescriptions about types of issues which refer to general issues such as those in employment relationships (i.e., autonomy, equality, respect for individuals). The third level is casuistry (case-based reasoning) which refers to the reasoning used in particular situations. For example, in selecting an employee for a promotion, this level refers to what reasoning is used to select between two candidates who are candidates for the promotion. In this instance, managers need to work out what is the right thing to do in this particular case, within the prescriptions about current employment relationships, themselves based on appropriate ethical principles, which in this example include the deontological principle of justice.

### *8.2.4 Foundations of Ethical Opinions*

In addition to applying the aforementioned moral principles, it is also important to consider the foundations of general ethical opinions. Cohen (2004) asserts that six formal conditions apply to ethical opinions: (1) impartiality involves an individual going outside or beyond their own interest in reaching a decision, and forbids treating one person differently from another when there is not a good reason to do so; (2) universalisability in the decision means that the decision can apply to anyone in relevantly similar circumstances to ensure that every individual is treated the same; (3) justifiability refers to being able to justify and give reasons to defend the opinion; (4) overridingness means that moral opinions have status and are decisive and take precedence over other non-moral reasons; (5) non-negotiability is similar to overridingness in that the decision is consistent and binding on all people at all times in all places given the same relevant circumstances; and (6) action-guidance relates to the decision being tied to action and urges a person to engage in that practical activity as ethical opinions are rarely abstract and are usually related to taking action.

Cohen's (2004) ethical principles are tied into the principles of procedural justice as procedural justice is the degree to which individuals affected by allocation decisions perceive them to have been made according to fair methods and guidelines (Folger & Greenberg, 1985). Indeed, Greenberg's (1994) conceptualisation of procedural justice emphasises consistency, soliciting input, and the opportunity for two-way communication, and procedurally just decisions are made with accuracy and without bias.

## 8.3 Procedural Justice

In his seminal work, Leventhal (1980) established six principles of procedural justice: (1) consistency in application across individuals and over time; (2) freedom from bias on the part of the decision-maker(s); (3) accuracy and completeness of information used to make the decision; (4) the opportunity to appeal an outcome; (5) the opportunity for those affected by the outcome to voice their views and feelings; and (6) upholding ethical and moral standards of the individuals affected by the decision.

Procedural justice perceptions are based on the actions taken by a decision-maker to arrive at an outcome in a specific instance (e.g., when deciding who should

receive the promotion) hence, a failure to apply the promotion policy correctly or to be biased in the decision may evoke procedural unfairness concerns in employees within the work setting. Prior research in the university context has identified procedural justice as a highly salient form of justice for academic staff (Gillespie et al., 2001). Hence, it is important to note that the first wave of data collection in the AUSS occurred during an arduous period of enterprise bargaining in the Australian higher education sector when academic staff in particular, were sensitive to justice issues that involved their working conditions, remuneration, and their opportunities for tenure and/or promotion.

Chapter 4 reported on the results of the AUSS, specifically, the Time 1 findings related to employee-level perceptions of the fairness of appointment, promotion, performance appraisal, and communication processes (see Gillespie et al., 2001). In the AUSS, employee perceptions of procedural justice were low at Time 1, and procedural justice was a strong predictor of job satisfaction and employees' commitment to the university (Winefield et al., 2002). In addition, perceived procedural justice was identified as a key predictor of stress. In order to address the low levels of procedural justice, Winefield et al. (2002) recommended that universities review the fairness of promotion, redundancy and performance appraisal procedures as a means of enhancing employee perceptions of procedural justice and job satisfaction. Indeed, employees who perceive procedural justice as highly discretionary and controlled by management (Rhoades & Eisenberger, 2002) may view actions taken by organisations to increase employee perceptions of justice as an indication of care and concern for their well-being.

## 8.4 Research Questions

In the procedural justice literature discussed in Chapter 5, it was noted that perceptions of procedural justice could be increased by drafting formal policies that will be seen as fair (Ambrose & Schminke, 2003) as this provides employees with information regarding how outcomes are determined (Rhoades & Eisenberger, 2002), offers them some control over the process, and reassures them about the fairness of decisions (Thibaut & Walker, 1975). It is proposed that more can be learned about employees' perceptions of justice by examining the factors that may lead to employees' judgments of procedures and policies within highly formalised university

settings. Hence, this research will use a longitudinal approach that examines the effects of perceived procedural justice over time in order to examine the following research questions:

*Research Question 1:* What are the Time 1 workplace factors and individual characteristics that predict perceived procedural justice at Time 2?

Due to their different functional roles, and as prior research discussed in Chapters 5 and 7 indicates that academic and non-academic staff experience working conditions somewhat differently (see Winefield et al., 2002; Winefield et al., 2003; Winefield, A., et al., 2008), the present study will also examine:

*Research Question 2:* Do the predictors of perceived procedural justice differ for academic and non-academic staff?

## 8.5 Applying the JD-R Theoretical Framework

The present study uses the JD-R theoretical framework (Bakker & Demerouti, 2007; Demerouti et al., 2001) discussed in Chapter 2, as it encompasses features of the work environment that can contribute to job strain or conversely, to improve morale and work-related attitudes. The two-factor JD-R model proposes that employee well-being is related to a range of workplace variables that are conceptualised as either job demands or job resources. As outlined in Chapter 2, job demands refer to the physical, psychological, social, or organisational aspects of the job that require sustained effort or skills and are associated with physiological and/or psychological costs (Bakker & Demerouti, 2007). On the other hand, job resources are the physical, psychological, social, or organisational aspects of the job that may reduce job demands, aid in achieving work goals, or stimulate personal growth, learning and development (Bakker & Demerouti, 2007; Demerouti et al., 2001; Schaufeli & Bakker, 2004). Job resources may include pay, career opportunities, job security, supervisor and co-worker support, team climate, role clarity, participation in decision making, and skill variety (Bakker & Demerouti, 2007).

The possible predictors of procedural justice have been identified based on prior AUSS research (see Gillespie et al., 2001; Winefield et al., 2002) that identified factors that both academic and non-academic staff perceived to impact on their occupational stress and well-being. These factors included work pressure, work-home

conflict; procedural justice, job (in)security, autonomy, trust in senior management, and trust in supervisor. By applying the JD-R theoretical model, the job demands aspect will consist of the demands of work pressure and work-home conflict, whereas the job resources aspect of the model will comprise: job (in)security, autonomy, trust in senior management, trust in supervisor, and also job satisfaction and organisational commitment. Further, the Time 1 level of procedural justice will be included as an additional predictor to ensure that tests of the relationships between the hypothesised predictors and outcomes are rigorous. The predictor model will also contain the individual personality characteristics of negative affectivity and job involvement as they have been related to occupational stress and well-being in the literature, and both characteristics were used in examining the predictors of psychological strain, job satisfaction, and organisational commitment in the AUSS research (see Winefield et al., 2002).

The hypothesised predictors include the well recognised occupational stressors of work pressure and work-home conflict. Work pressure is the sense of having too much work to do in the time available which is often treated as an indicator of job demands (Demerouti, Bakker, & Bulters, 2004). Work-home (home-work) conflict refers to the process of an individual's functioning and behaviour at home (work) being negatively influenced by demands made upon their time and effort in the work (home) domain. Work–home conflict is a specific form of role conflict that is regarded as a key stressor in reviews of the literature (DeFrank & Ivancevich, 1998), and has been shown to predict exhaustion, health complaints and depressive affect (Demerouti et al., 2002; Geurts, Kompier, Roxburgh, & Houtman, 2003).

On the other hand, job resources such as job autonomy refer to the degree to which employees can influence important decisions such as the pacing and timing of their work. Autonomy is a critical component of Karasek's (1979) Demand-Control model described in Chapter 2, and is routinely incorporated as a resource in tests of the JD-R model (Bakker & Demerouti, 2007). Indeed, its influence in the university context has also been examined in a longitudinal test of the JD-R model in a sample of Australian academics, as Time 1 resources (perceptions of procedural fairness/justice, job autonomy) directly predicted Time 2 psychological strain and organisational commitment (Boyd et al., 2011).

As outlined in Chapter 5, research has found that job satisfaction, organisational commitment, trust in senior management, and perceived procedural justice are of key importance to university staff (Abouserie, 1996; Dua, 1994; Gillespie et al., 2001; Hartman et al., 1999; Taris et al., 2001; Winefield et al., 2002; Winefield et al., 2003; Winefield, A., et al., 2008; Winefield, T., et al., 2008).

Job satisfaction has been referred to as the broad positive emotional reactions and attitudes individuals have towards their jobs (Locke, 1969), and refers to an affective judgement of the content and/or the circumstances of their job. Chapter 5 reported on job satisfaction research within the university context which found that academic staff reported intrinsic factors such as student interaction, relationships with fellow colleagues, the prestige of academic positions, autonomy and job variety as their areas of greatest satisfaction (Kinman, 2001; Winefield et al., 2002).

Another important attitude examined in Chapters 5 and 6 is affective organisational commitment which refers to loyalty to the employer, because a committed individual: (1) strongly identifies with the organisation, accepting its goals and values; (2) exerts effort on its behalf; and (3) values its membership (Mowday et al., 1979). Affective organisational commitment develops from an employee's experiences at work and, similar to a social exchange process, an employee's commitment can be increased by providing positive experiences (Arnold et al., 1995).

Job insecurity, employees' (negative) expectations about job continuity, has been linked to job satisfaction and organisational commitment (Ashford, Lee, & Bobko, 1989). In the AUSS research, job insecurity was shown to be a predictor of both psychological strain and job satisfaction for both academic and non-academic staff (Winefield et al., 2002).

In Chapter 6, trust was defined as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer et al., 1995, p. 712). Trust in supervisor (which in the university context is typically a Head of Department) and trust in senior management refer to the extent to which supervisors or senior management are perceived by their subordinates to behave with integrity, competence, and benevolence towards them. In a recent longitudinal study over three time-points,

Holtz and Harold (2009) examined overall organisational and overall supervisory justice perceptions of 213 individuals, and found significant variability in overall justice perceptions across time, specifically within-person variance in overall organisational and supervisory justice. They also found that trust emerged as a particularly strong predictor of within-person and between-person variance in overall justice perceptions.

The personality characteristics of negative affectivity and job involvement were also included in the analyses as possible predictors of procedural justice as they have been shown in the literature to exert an impact on strain, burnout and the work attitudes of job satisfaction and organisational commitment (Landsbergis, Schnall, Deitz, Friedman, & Pickering, 1992; Thoresen, Kaplan, Barsky, Warren, & de Chermont, 2003). Negative affectivity, refers to "the disposition to experience aversive emotional states" (Watson & Clark, 1984, p. 465), and as a stable personality characteristic it may influence work attitudes over time. Job involvement is a function of both individual differences and job characteristics and is the extent to which employees prioritise and become involved in their work (Lodahl & Kejner, 1965).

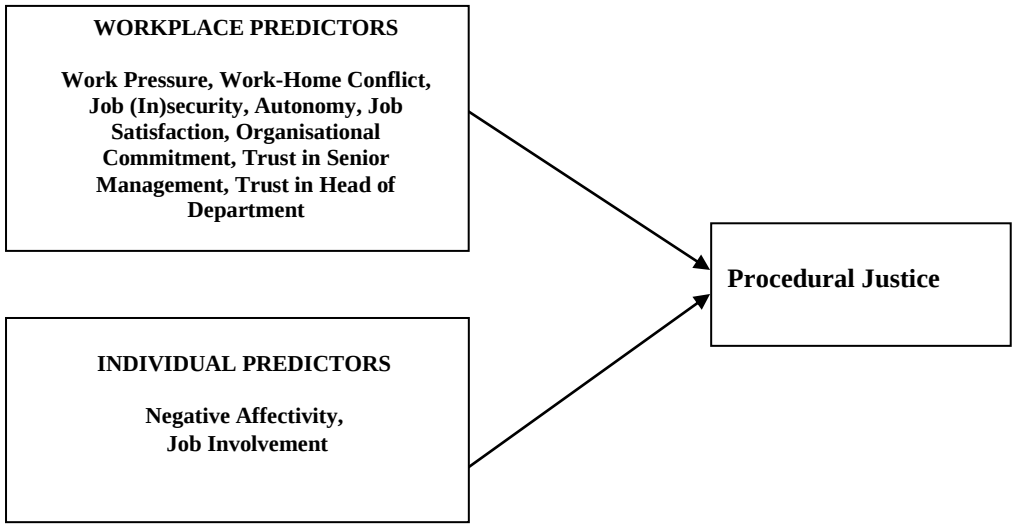


**Figure 8.1.** *A Conceptual Model of the Hypothesised Predictors of Procedural Justice (adapted from Winefield et al., 2002; Winefield, A., et al., 2008).*

Previous research has indicated that academic and non-academic respondents to the AUSS research project, experienced working conditions somewhat differently, with academic staff reporting more adverse work experiences than non-academic staff (e.g., Winefield et al., 2003; Winefield, A., et al., 2008). As discussed in Chapter 5, research has also shown differences between employee populations working in the university context (see Winefield et al., 2003). Winefield et al.'s study, for example, found different relationships between stress and performance by staff category of employee, with Australian academic staff reporting slightly higher levels of psychological distress and lower levels of job satisfaction compared with non-academic staff. Given the different working conditions and functional roles of academic and non-academic employees, these two groups will be examined separately.

## 8.6 Method

### *8.6.1 Participants and Procedure*

As pointed out in Chapter 4, 969 participants responded to both the 2000 (Time 1) and 2003/4 (Time 2) surveys at a representative sample of 13 Australian public universities. Of those participants, this study examines responses from 945 tenured and contract staff (as distinct from casual or hourly paid) who provided responses to the measure of procedural justice. The sample comprised 345 men (37%) and 600 women (63%), and 399 (42%) academic staff (faculty) and 546 (58%) non-academic staff which is typical of the national profile of academic and non-academic staff (DEST, 2003).

As noted in Chapters 6 and 7, participation in both surveys was anonymous. However, data were matched across surveys using code identifiers.

### *8.6.2 Measures*

Both the Time 1 and Time 2 questionnaires sought demographic information (i.e., university, age), and the following work attitude and personality measures were assessed in the survey (see Appendix D & E respectively). The means shown for job satisfaction and negative affectivity are based on the total scores, whereas the measures of work pressure, work-home conflict, job insecurity, autonomy, affective organisational commitment, trust in senior management, trust in head of department,

job involvement and perceived procedural justice are based on the item means. The measures of direct relevance, described below, had internal reliabilities between .67 and .96 (Cronbach's alpha coefficients), thus indicating acceptable reliability (see Table 8.1). It should be noted that work pressure was strongly associated with work-home conflict ($r$ = .65) but none of the correlations were high enough to suggest that any of the self-report measures were assessing the same constructs (see De Vellis, 1991; Nunnally & Bernstein, 1994).

***Work Pressure.*** Three items from Beehr, Walsh and Taber's (1976) Work Pressure scale assessed work overload. An example item is "I am rushed in doing my job". Questions were rated on a 4-point scale (1 = *definitely false*, 4 = *definitely true*).

***Work-Home Conflict.*** Three items from Frone and Yardley's (1996) scale measured work-home conflict. An example item is, "My family dislikes how often I am preoccupied with my work while I am at home". Each item was rated on a 5-point scale (1 = *never*, 5 = *very frequently*).

***Job (In)security.*** Three items were drawn from Ashford et al. (1989) measure of job insecurity. The items asked staff to rate the likelihood (1 = *very unlikely*, 5 = *likely*) of losing their job, being moved to a different department, finding one's department's future uncertain, or being pressured to accept early retirement.

***Workplace Autonomy.*** A 9-item measure, drawn from the Moos Work Environment Scale autonomy sub-scale (Moos & Insel, 1974), was used. Example items are "Staff are encouraged to make their own decisions", and "Staff function fairly independently of management" (1 = *strongly disagree*, 5 = *strongly agree*).

***Job Satisfaction.*** The 15–item scale developed by Warr, Cook, and Wall (1979) assessed job satisfaction (e.g., "How satisfied or dissatisfied do you feel with your opportunity to use your abilities?"). Each item was scored on a 7–point Likert scale (1 = *extremely dissatisfied*; 7 = *extremely satisfied*).

***Affective Organisational Commitment.*** Five items from Porter, Steers, Mowday and Boulian's (1974) scale measured affective organisational commitment. An example item is "I really care about the future of this university." Each item was scored on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*).

***Trust in Senior Management.*** An 8–item scale developed from Mayer and Davis (1999) and Butler (1991) measured trust in senior management (e.g., "Senior Management of my University treat staff fairly"). Each item was scored on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*).

***Trust in Head of Department.*** An 8–item scale adapted from Mayer and Davis (1999) and Butler (1991) measured trust in head of department. The scale assessed staff perceptions of the level of integrity, competence, and concern for staff shown by their head of department, school or unit.

***Procedural Justice.*** A 4–item scale developed by Gillespie et al. (2001) measured perceptions of procedural justice (e.g., "Staff performance is fairly appraised"). Each item was scored on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*).

***Negative Affectivity.*** The 12–item measure of Neuroticism from the NEO-Five Factory Inventory (NEO–FFI: Costa & McCrae, 1992) measured negative affectivity, which assesses an individual's disposition to experience negative emotions such as anxiety, depression and vulnerability. Each item was rated on a 5-point scale (0 = *strongly disagree*, 4 = *strongly agree*, with reverse scoring for positively phrased items).

***Job Involvement.*** Four items from the scale developed by Lodahl and Kejner (1965) measured the extent to which staff are involved in their work. An example item is "The most important things that happen to me involve my work". Each item was rated on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*).

***Control Variables.*** To reduce the possibility of spurious relationships introduced by demographic characteristics, four control variables were entered in all the equations: age, gender (1 = *male*, 2 = *female*), length of organisational tenure, and staff group (1= *academic*, 2 = *non-academic*). The Time 1 level of procedural justice was also entered into each equation.

### *8.6.3 Analyses*

Analyses were performed using Predictive Analytics Software (PASW) 18.0. Preliminary checks were conducted to ensure that there was no violation of the

assumptions of multicollinearity, normality, linearity, and homoscedasticity. As prior levels of procedural justice at Time 1 were included as additional predictors in the analysis, tests of the aforementioned relationships are more rigorous as they show that the predictors account for changes in the levels of the dependent variables (Zapf et al., 1996).

## 8.7 Results

The means, standard deviations, internal reliability coefficients and bivariate correlations for the variables are displayed in Table 8.1.

**Table 8.1** *Descriptive Statistics and Variable Inter-Correlations*

| Variable | *Mean*[a] | *SD* | α | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Age | 46.52 | 9.28 | — | | | | | | | | | | | | | | | |
| 2. Gender | 0.63 | 0.48 | — | -.14** | | | | | | | | | | | | | | |
| 3. Tenure | 12.10 | 7.34 | — | .46** | -.09* | | | | | | | | | | | | | |
| 4. Staff Group | 1.58 | 0.49 | — | -.20** | .20** | -.07* | | | | | | | | | | | | |
| 5. Work Pressure | 3.22 | 0.63 | .78 | .17** | -.06 | .15** | -.33** | | | | | | | | | | | |
| 6. Work-Home Conflict | 3.30 | 1.03 | .86 | .12** | -.07* | .10** | -.39** | .65** | | | | | | | | | | |
| 7. Job Insecurity | 2.59 | 0.92 | .68 | .24** | -.04 | .20** | -.04 | .09** | .15** | | | | | | | | | |
| 8. Autonomy | 3.07 | 0.54 | .70 | -.12** | .06 | -.15** | -.03 | -.09** | -.14** | -.26** | | | | | | | | |
| 9. Job Satisfaction | 66.43 | 13.22 | .87 | -.06 | .15** | -.13** | .18** | -.28** | -.41** | -.44** | .57** | | | | | | | |
| 10. Org. Commitment | 3.49 | 0.69 | .80 | -.01 | .08* | -.09** | .17** | -.13** | -.16** | -.20** | .32** | .49** | | | | | | |
| 11. Trust in Senior Mgmt | 2.55 | 0.86 | .95 | -.08* | .04 | -.18** | .19** | -.28** | -.30** | -.26** | .37** | .55** | .44** | | | | | |
| 12. Trust in Head of Dept. | 3.36 | 1.01 | .96 | -.04 | -.02 | -.09** | -.02 | -.03 | -.13** | -.25** | .41** | .47** | .18** | .21** | | | | |
| 13. T1 Procedural Justice | 3.06 | 0.66 | .72 | .01 | .03 | -.06 | -.01 | -.06 | -.15** | -.26** | .40** | .54** | .30** | .41** | .43** | | | |
| 14. Negative Affectivity | 19.33 | 7.82 | .88 | -.16** | .06 | .01 | .00 | .07* | .24** | .21** | -.15** | -.27** | -.18** | -.13** | -.09** | -.14** | | |
| 15. Job Involvement | 2.86 | 0.67 | .67 | .21** | -.11* | .14** | -.27** | .22** | .36** | .02 | .08* | .05 | .22** | .02 | .05 | .10** | .08* | |
| 16. T2 Procedural Justice | 3.08 | 0.81 | .80 | -.01 | .00 | .03 | .05 | -.01 | -.12** | -.21** | .24** | .42** | .22** | .32** | .28** | .52** | -.12** | .08* |

*Note.* $N$ = 728—945. [a]For JS and NA, item scores were summed. Item scores were averaged for all other measures. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

The descriptive statistics for the variables for both academic and non-academic staff are displayed in Table 8.2.

**Table 8.2** *Means and SDs of Demographic and Workplace Factors and Individual Characteristics for both Staff Categories*

| | Academic (*n* = 249) | | Non-Academic (*n* = 324) | |
|---|---|---|---|---|
| | M | SD | M | SD |
| Age | 48.34 | 7.96 | 44.94 | 9.26 |
| Gender | 0.51 | 0.50 | 0.69 | 0.46 |
| Length of Tenure | 13.09 | 7.59 | 11.90 | 7.07 |
| Staff Group | 1.02 | 0.15 | 1.98 | 0.15 |
| Work Pressure | 3.46 | 0.56 | 3.06 | 0.61 |
| Work-Home Conflict | 3.82 | 0.98 | 2.93 | 0.91 |
| Job Insecurity | 2.69 | 0.94 | 2.60 | 0.88 |
| Autonomy | 3.04 | 0.53 | 3.06 | 0.55 |
| Job Satisfaction | 62.71 | 13.73 | 67.89 | 13.00 |
| Organisational Commitment | 3.36 | 0.74 | 3.55 | 0.63 |
| Trust in Senior Management | 2.32 | 0.90 | 2.65 | 0.78 |
| Trust in Head of Department | 3.35 | 1.07 | 3.28 | 0.99 |
| Procedural Justice T1 | 3.06 | 0.68 | 3.04 | 0.70 |
| Procedural Justice T2 | 3.06 | 0.81 | 3.16 | 0.80 |
| Negative Affectivity | 19.67 | 8.19 | 19.10 | 7.64 |
| Job Involvement | 3.06 | 0.67 | 2.71 | 0.64 |

*Note*. Coding: Gender (Male =1, Female = 2, Staff Group (Academic = 1, Non-academic = 2).

The hierarchical regression analyses investigating the predictors of Time 2 procedural justice for both staff categories are displayed in Table 8.3

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**Table 8.3** *Results of Multiple Regression Analyses Predicting Time 2 Procedural Justice: All Staff (N = 573)*

| | Step 1 | | | | Step 2 | | | | Step 3 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Predictors** | ***B*** | ***SE B*** | **β** | ***t*** | ***B*** | ***SE B*** | **β** | ***t*** | ***B*** | ***SE B*** | **β** | ***t*** |
| Age | -.01 | .02 | -.04 | -0.77 | -.03 | .02 | -.07 | -1.63 | -.03 | .02 | -.08 | -1.84 |
| Gender | -.11 | .28 | -.02 | -0.36 | -.25 | .24 | -.04 | -1.03 | -.21 | .25 | -.03 | -0.86 |
| Tenure | .02 | .02 | .05 | 1.06 | .04 | .02 | .09 | 2.28* | .04 | .02 | .09 | 2.30* |
| Staff Group | .35 | .28 | .05 | 1.27 | .31 | .26 | .05 | 1.19 | .34 | .27 | .05 | 1.28 |
| Work Pressure | | | | | .50 | .24 | .10 | 2.07* | .47 | .24 | .09 | 1.96* |
| Work-Home Conflict | | | | | .05 | .16 | .01 | 0.29 | .06 | .17 | .02 | 0.34 |
| Job Insecurity | | | | | -.05 | .15 | -.01 | -0.35 | -.03 | .15 | -.01 | -0.20 |
| Autonomy | | | | | -.48 | .27 | -.08 | -1.78 | -.49 | .27 | -.08 | -1.82 |
| Job Satisfaction | | | | | .05 | .02 | .22 | 3.58*** | .05 | .02 | .22 | 3.50** |
| Organisational Commitment | | | | | -.15 | .20 | -.03 | -0.75 | -.20 | .20 | -.04 | -0.97 |
| Trust in Senior Management | | | | | .36 | .17 | .09 | 2.13* | .36 | .17 | .09 | 2.14* |
| Trust in Head of Department | | | | | .12 | .14 | .04 | 0.92 | .13 | .14 | .04 | 0.96 |
| Time 1 Procedural Justice | | | | | .46 | .05 | .39 | 8.82*** | .46 | .05 | .39 | 8.79*** |
| Negative Affectivity | | | | | | | | | -.02 | .02 | -.04 | -1.01 |
| Job Involvement | | | | | | | | | .10 | .20 | .02 | .049 |
| *Adj.* $R^2$ | -.00 | | | | | | | | | | | |
| *F* | .77 | | | | | | | | | | | |
| $\Delta R^2$ | | | | | 0.31 | | | | | | | |
| *F change* | | | | | 28.98*** | | | | | | | |
| $\Delta R^2$ | | | | | | | | | | | | .00 |

| | Step 1 | | | | Step 2 | | | | Step 3 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Predictors** | ***B*** | ***SE B*** | **β** | ***t*** | ***B*** | ***SE B*** | **β** | ***t*** | ***B*** | ***SE B*** | **β** | ***t*** |
| *F change* | | | | | | | | | | | | .59 |

*Note.* $\Delta R^2$ = change in $R^2$. $^{*}p \leq .05$. $^{**}p \leq .01$. $^{***}p \leq .001$.

As can be observed in Table 8.3, employee perceptions of procedural justice at Time 2 were predicted by workplace factors that predicted 31% of the variability in procedural justice. The individual personality characteristics did not account for the variance in justice. Excluding the effects of the Time 1 level of procedural justice, the strongest predictor of justice was job satisfaction which means that the more satisfied that employees are with their jobs, the higher their perceptions of procedural justice. University employees' trust in their senior management, and their length of organisational tenure predicted justice as longer tenured employees perceived higher levels of justice. Of particular note, and unexpectedly, work pressure also positively predicted procedural justice which suggests that employees who may feel under work or time pressure have higher perceptions of the fairness and justice of procedures than those who feel less pressured by work.

The hierarchical regression analyses investigating the predictors of Time 2 procedural justice for academic staff are displayed in Table 8.4.

**Table 8.4** *Results of Multiple Regression Analyses Predicting Time 2 Procedural Justice: Academic Staff*

| | Step 1 | | | | Step 2 | | | | Step 3 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Predictors** | ***B*** | ***SE B*** | **β** | ***t*** | ***B*** | ***SE B*** | **β** | ***t*** | ***B*** | ***SE B*** | **β** | ***t*** |
| Age | -.03 | .03 | -.08 | -1.01 | -.03 | .03 | -.06 | -1.01 | -.06 | .03 | -.09 | -1.32 |
| Gender | .32 | .42 | .05 | .76 | -.12 | .36 | -.02 | -0.34 | .01 | .37 | .00 | 0.03 |
| Tenure | .02 | .03 | .06 | .72 | .04 | .03 | .09 | 1.31 | .04 | .03 | .09 | 1.40 |
| Work Pressure | | | | | .85 | .39 | .14 | 2.18* | .76 | .39 | .13 | 1.94 |
| Work-Home Conflict | | | | | -.28 | .23 | -.07 | -0.99 | -.30 | .25 | -.09 | -1.16 |
| Job Insecurity | | | | | -.03 | .21 | -.01 | -0.15 | -.01 | .22 | -.00 | -0.03 |
| Autonomy | | | | | -.14 | .41 | -.02 | -0.35 | -.14 | .41 | -.02 | -0.33 |
| Job Satisfaction | | | | | .05 | .02 | .22 | 2.37* | .05 | .02 | .20 | 2.10* |
| Organisational Commitment | | | | | .03 | .27 | .01 | 0.10 | -.10 | .28 | -.02 | -0.36 |
| Trust in Senior Management | | | | | -.08 | .23 | -.02 | -0.35 | -.05 | .23 | -.01 | -0.21 |
| Trust in Head of Department | | | | | -.02 | .19 | -.01 | -0.10 | .02 | .20 | .01 | 0.12 |
| Time 1 Procedural Justice | | | | | .55 | .08 | .45 | 6.51*** | .54 | .08 | .45 | 6.44** |
| Negative Affectivity | | | | | | | | | -.02 | .02 | -.06 | -0.98 |
| Job Involvement | | | | | | | | | .44 | .31 | .09 | 1.45 |
| *Adj. $R^2$* | -.01 | | | | | | | | | | | |
| *F* | .54 | | | | | | | | | | | |
| $\Delta R^2$ | | | | | | | 0.36 | | | | | |
| *F change* | | | | | | | 14.92*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | | | 0.01 |
| *F change* | | | | | | | | | | | | 1.43 |

*Note.* $N = 249$. $\Delta R^2$ = change in $R^2$. $^{*}p \leq .05$. $^{**}p \leq .01$. $^{***}p \leq .001$.

For academic staff, Table 8.4 shows that workplace factors predicted 36% of the variance in justice. After controlling for the Time 1 level of justice at Step 2, job satisfaction and work pressure were the strongest predictors of justice, however after the inclusion of the individual difference factors of negative affectivity and job involvement, the effects of work pressure did not endure and only job satisfaction remained a predictor of justice.

The hierarchical regression analyses investigating the predictors of procedural justice for non-academic staff are displayed in Table 8.5.

**Table 8.5** *Results of Multiple Regression Analyses Predicting Time 2 Procedural Justice: Non-Academic Staff*

| | Step 1 | | | | Step 2 | | | | Step 3 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Predictors** | ***B*** | ***SE B*** | **β** | ***t*** | ***B*** | ***SE B*** | **β** | ***t*** | ***B*** | ***SE B*** | **β** | ***t*** |
| Age | -.01 | .02 | -.02 | -0.36 | -.03 | .02 | -.08 | -1.37 | -.03 | .02 | -.08 | -1.32 |
| Gender | -.48 | .39 | -.07 | -1.23 | -.48 | .34 | -.07 | -1.41 | -.49 | .35 | -.07 | -1.40 |
| Tenure | .03 | .03 | .07 | 1.08 | .05 | .02 | .11 | 2.16* | .05 | .02 | .11 | 2.20* |
| Work Pressure | | | | | .36 | .31 | .07 | 1.17 | .33 | .31 | .06 | 1.05 |
| Work-Home Conflict | | | | | .27 | .21 | .08 | 1.27 | .32 | .23 | .09 | 1.43 |
| Job Insecurity | | | | | -.06 | .21 | -.02 | -0.30 | -.06 | .21 | -.02 | -0.29 |
| Autonomy | | | | | -.67 | .37 | -.12 | -1.9 | -.69 | .38 | -.12 | -1.82 |
| Job Satisfaction | | | | | .06 | .02 | .23 | 2.77** | .06 | .02 | .23 | 2.76** |
| Organisational Commitment | | | | | -.58 | .29 | -.12 | -1.99* | -.55 | .31 | -.11 | -1.78 |
| Trust in Senior Management | | | | | .89 | .25 | .22 | 3.58*** | .89 | .25 | .22 | 3.57*** |
| Trust in Head of Department | | | | | .19 | .19 | .06 | 1.01 | .21 | .19 | .06 | 1.06 |
| Time 1 Procedural Justice | | | | | .39 | .07 | .34 | 5.85*** | .39 | .07 | .34 | 5.86*** |
| Negative Affectivity | | | | | | | | | -.01 | .02 | -.02 | -0.33 |
| Job Involvement | | | | | | | | | -.16 | .27 | -.03 | -0.61 |
| *Adj.* $R^2$ | -.00 | | | | | | | | | | | |
| *F* | .88 | | | | | | | | | | | |
| $\Delta R^2$ | | | | | | | 0.30 | | | | | |
| *F change* | | | | | | | 15.37*** | | | | | |
| $\Delta R^2$ | | | | | | | | | | | | .00 |
| *F change* | | | | | | | | | | | | .27 |

*Note. N = 324.* $\Delta R^2$ = change in $R^2$. $^{*}p \leq .05$. $^{**}p \leq .01$. $^{***}p \leq .001$.

Table 8.5 shows that for non-academic staff, workplace factors predicted 30% of the variance in justice. Consistent with the results for academic staff, job satisfaction was the strongest predictor of higher perceptions of procedural justice. However, there were significant differences between the two staff groups as non-academic employees' level of trust in their senior management and their length of organisational tenure were also predictors of justice. This result is consistent with the organisational justice and trust literature as longer tenure employees who have been with the organisation for longer periods may develop a more favorable view of their treatment by the organisation (Rhoades & Eisenberger, 2002).

Indeed, in none of the three hierarchical regression anlayses was either negative affectivity or job involvement related to employee perceptions of procedural justice. However, an unexpected finding was the negative relationship between non-academic employees' levels of organisational commitment and their justice perceptions. Whilst the effect of lower levels of commitment on justice did not endure when the individual personality characteristics were added to the analyses at Step 2, this unexpected result warrants further investigation.

## 8.8 Discussion

This study used workplace and individual difference characteristics to determine the factors that predicted employee perceptions of procedural justice in the university context. The results highlight the importance of workplace factors in enhancing fair procedures to encourage reciprocity from university employees.

Job satisfaction was a dominant and enduring predictor of perceived procedural justice for all staff categories. In addition, the workplace factor of employees' trust in senior management predicted justice, and the demographic factor of an employees' length of organisational tenure was a predictor as trust in senior management and perceptions of justice develop over time through the repeated interactions between employee-organisation. It is also likely that employees who trust senior management and perceive things to be done fairly are more likely to stay longer in the job. However, unexpectedly, work pressure also positively predicted procedural justice which suggests that university employees who may feel under work or time pressure have higher perceptions of the fairness and justice of procedures than

those who feel less pressured by work. While this result was not evident in the analyses for each of the two staff categories, it warrants further investigation.

The two staff categories of academic and non-academic employees were analysed separately in order to explore any occupation specific effects due to their different functional roles. There were differences in the predictors of procedural justice for academic and non-academic staff, and these results are in line with prior research showing that academic employees report more adverse work experiences than non-academic employees (Winefield et al., 2003; Winefield, A., et al., 2008).

As discussed in Chapter 5, employee perceptions of trust in senior management and perceptions of procedural justice evolve over time through the repeated interactions between an employee and their employer, hence a strength of the study is the longitudinal approach that examines the effects of perceived procedural justice over time.

In addition, this study adds to research on applied business ethics as it focuses on the ethical aspects of procedural justice, psychological contracts, and the normative moral principles of autonomy, equality, and respect for individuals within employment relationships. By applying ethical principles, strategies for enhancing employee perceptions of procedural justice should include involving employees in the redesign of existing procedures, greater transparency and employee voice and participation in their implementation, consistency in applying the decisions, and clearer communication of the benefits of the procedures to employees. These ethical principles are consistent with Leventhal's (1980) principles of procedural justice.

The next three Chapters (9, 10 and 11), comprise three qualitative studies that aim to contribute to the improved management of employee health and well-being at work by examining HR stress reduction and/or management initiatives undertaken at universities between 2000 and 2003/04. The first of the qualitative studies, Study 4, expands on the results of Study 3 by documenting the HR stress-reduction interventions and strategies that were implemented by senior management at five universities between 2000 and 2003 in order to address job demands and enhance employee perceptions of procedural justice and other work-related attitudes. Further, Study 4 examines potential relationships between the objective intervention measures implemented by management, and self-reports of employees' well-being and work-

related attitudes. Study 5 focuses specifically on employee-level perceptions of the effective stress-reduction strategies at the five aforementioned universities. This research is extended in the final study which is a cross-sectional study of 13 universities that investigates employees' reports of the stress reduction strategies that they perceived to reduce their levels of occupational stress between 2000 and 2003.

Study 4 is presented as a paper in the format required by the journal in which it is submitted to. The paper is preceded by a brief introduction, and followed by a brief discussion linking the paper to the other studies and to the project as a whole.

# Chapter 9:
# Study 4 – A Multi-Case Study of HR Stress Interventions

## 9.1 Overview

Study 4 extends the results of Study 3 which provided an important practical insight into the specific factors that predict procedural justice in organisations. Study 4 aims to enhance the understanding of work stress mechanisms discussed in Chapter 2, specifically the JD-R theoretical model, and builds upon the research evaluating stress interventions described in Chapter 3. The present study investigates the key HR stress-reduction and management interventions implemented by senior management at five Australian universities between 2000 and 2003 in order to enhance employee well-being and positive work-related attitudes.

The study had two aims: (1) to investigate objective measures of the HR stress-reduction strategies implemented at five universities to determine what types of interventions, if any, were effective in lowering psychological strain, and heightening positive work-related attitudes (perceived procedural justice, job satisfaction, organisational commitment, and trust in senior management); and (2) to examine employee-level responses at two time-points to investigate any changes in employee-levels of psychological strain, perceptions of procedural justice, job satisfaction, organisational commitment, and trust in senior management.

The following paper is presented in the format required by the Journal of Organizational Behavior and is currently under review[4].

## 9.2 Paper Under Review:

Pignata, S., Winefield, A. H., Boyd, C. M., & Provis, C. (under review). A multi-case study of HR stress interventions: Critical ingredients for success. *Journal of Organizational Behavior.*

[4] The procedural justice/fairness aspects of this paper were presented at the 11th European Congress of Psychology (ECP) 2009, Oslo, Norway, 7-10 July 2009. Pignata, S., Winefield, A. H., Provis, C., & Boyd, C. M. (2009). *Stress-reduction interventions in universities: Perceptions of procedural fairness.*
Other aspects of this paper were presented at the 30th Stress and Anxiety Research (STAR) Conference, Budapest, Hungary, 16-18 July, 2009. Pignata, S., Winefield, A. H., Provis, C., & Boyd, C. M. (2009). *Stress-reduction interventions in universities.*

# A multi-case study of HR interventions: Critical ingredients for success

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**Abstract**

To enhance the understanding of work stress mechanisms and build upon research evaluating stress interventions, we investigated key human resource (HR) stress interventions implemented at five Australian universities between 2000 and 2003. Cross-sectional data from 4603 participants at two time points showed that employee levels of organizational commitment and/or trust in senior management were higher at four of these universities in 2003, and employee perceptions of procedural justice were higher at all the universities in 2003. Five senior HR Directors were surveyed to identify the measures taken to enhance employee well-being and morale. Results showed that senior management at all universities implemented strategies designed to: enhance training, career development and promotional opportunities for staff; improve remuneration and recognition practices; improve work-life balance for staff; and to enhance the fairness of organizational policies and procedures. The study contributes to the improved management of people at work by identifying university-specific HR initiatives, specifically leadership development programs, which were targeted towards improving university workplaces.

*Keywords:* HR interventions, stress, universities, well-being, trust, justice

## Introduction

A stress management intervention has been defined as "any activity, program, or opportunity initiated by an organization, which focuses on reducing the presence of work-related stressors or on assisting individuals to minimize the negative outcomes of exposure to these stressors" (Ivancevich, Matteson, Freedman, & Phillips, 1990, p. 252). Despite the wide variety of programs to manage stress and improve employee well-being and morale, little evaluative research on stress interventions has been reported in the literature (Burke, 1993; Caulfield, Chang, Dollard, & Elshaug, 2004; Cooper, 2001). Reasons for this relate primarily to the methodological and conceptual difficulties inherent in stress-intervention research. Indeed, a review of intervention studies conducted on Australian samples within the last decade found only six interventions (Caulfield et al., 2004). Accordingly, there have been widespread calls for researchers to address the fundamental questions of what interventions work, when are they effective, and "why should and how could organizational level stress interventions work?" (Briner & Reynolds, 1999, p. 648). We aim to address those questions by examining the types of organizational stress interventions that were implemented and their impact on employee strain and work-related attitudes in the specific context of Australian universities, an area experiencing high levels of occupational stress (Winefield, Boyd, Saebel, & Pignata, 2008).

### *Evaluating Interventions*

Evaluative research on interventions has found that the success of a stress prevention program depends on a combination of a bottom-up participative approach and a top-down approach that is supported by senior management (Kompier & Cooper, 1999). However, the difficulty in implementing successful organizational interventions is that they require co-

operation and participation from employees, unions and management (Nytrø, Saksvik, Mikkelsen, Bohle, & Quinlan, 2000), who may be in conflict. Moreover, factors such as organizational structure, size, resources, culture and values determine the appropriateness of interventions (Marshall & Cooper, 1981) and both the strategy and process of implementing an intervention may be as important as its content in achieving an effective outcome (Giga, Noblet, Faragher, & Cooper, 2003; Nielsen, Randall, & Albertsen, 2007).

Empirical research suggests that for a stress intervention to be effective: (1) the development of interventions should include a participatory approach and involve, and be supported by, employees, union members and senior management (Nytrø et al., 2000); (2) interventions should detail the process involved in implementing the interventions as it can play an important role in their success or failure; (3) the implementation of interventions should include multi-level approaches that combine individual-directed and organizational-directed stress management and reduction strategies (Giga, Cooper, & Faragher, 2003); (4) interventions should have clearly defined assessment/monitoring policies; and (5) evaluations should use multiple self-report and objective measures (Briner & Reynolds, 1999). However, there are difficulties in evaluating organizational interventions, as the few successful intervention studies that are published are often methodologically unsound (Beehr & Newman, 1998). To address this, Briner and Reynolds (1999, p. 659) urge researchers to examine a potential link "between changes in objective job conditions, changes in subjective perceptions of those job conditions and changes in employee wellbeing".

The goal of this project therefore is to use both quantitative and qualitative methods to attempt to address some of these conceptual and methodological difficulties, and to add to the literature on stress intervention and management theory. We focus on identifying the key human resource (HR) management practices that were implemented in five universities to

reduce or manage stress, and to improve employee morale. We also examine changes in employee levels of psychological strain and work-related attitudes.

*Classification of Interventions*

Work stress interventions are delineated into the classifications of primary, secondary or tertiary approaches (Cooper & Quick, 1999). According to Kompier and Cooper (1999), primary interventions are long-term approaches that aim to eliminate, reduce, or alter stressors at work (i.e., reducing staff workloads: Cooper & Quick, 1999). Secondary interventions aim to reduce or eliminate the effects of stress in employees who are showing signs of stress, by modifying or changing their stress response to inevitable or unchangeable demand, i.e., relaxation training, team building, stress management programs, programs to increase their coping capacity (Geurts & Gründemann, 1999). Thirdly, tertiary interventions treat employees with serious stress-related health problems by providing professional medical treatment or psychological counselling to heal specific problems (Cooper & Quick, 1999).

Moreover, work stress interventions may target the individual, the organization, or both the individual and the organization. Individual (person-directed) interventions focus on the employee, or group, to improve their coping resources in order to deal more effectively with demanding situations (Giga, Cooper, et al., 2003) or to modify their appraisal of a stressor to reduce its threat (Geurts & Gründemann, 1999). These interventions include exercise, relaxation training, meditation, biofeedback, cognitive-behavioral therapy, exercise, time management, cognitive coping strategies, stress management programs, and employee assistance programs (DeFrank & Cooper, 1987; Giga, Noblet, et al., 2003; van der Hek & Plomp, 1997).

Organizational (work-directed) interventions are often referred to as stressor reduction processes, and include job redesign, restructuring jobs, selection and placement, training and education programs, communication, clarifying employees' work roles and responsibilities, increasing employees' participation and decision-making authority, organizational restructure, changing the physical and environmental aspects, and addressing job health concerns and job resource issues (DeFrank & Cooper, 1987; Giga, Noblet, et al., 2003; van der Hek & Plomp, 1997). These interventions focus on the work environment to improve the fit between each employee and the workplace (Geurts & Gründemann, 1999).

Individual/organization interface-directed interventions focus on the interplay between individual employees and the organization, and include co-worker support groups to improve relationships at work, improving person-environment fit, addressing role issues, increasing workers' participation and autonomy (Burke, 1993; DeFrank & Cooper, 1987; Giga, Noblet, et al., 2003; van der Hek & Plomp, 1997). Giga, Noblet, et al. (2003) assert that a combination of multi-level organizational and individual intervention strategies are likely to be most effective in reducing stress as they address the organizational environment, the individual and the individual-organization interface.

In order to determine the level at which the HR intervention strategies investigated in the present study are targeted, they will be categorised as individual (person-directed), organizational (work-directed), and individual/organization interface directed, in accordance with the DeFrank and Cooper (1987) classification of occupational stress management programs. This classification approach will assist in evaluating the intervention strategies and their application in university workplaces. To appreciate fully the nature of the work-stress process, and gain an insight into the relation between psychosocial risk factors, occupational stress and stress-reduction strategies, it is necessary to examine them within the

framework of work-stress models, specifically the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001).

## *Theoretical Background*

### *The Job Demand-Resources (JD-R) Model*

The JD-R model is a recently developed theoretical model which encompasses features of the work environment that can contribute to job strain or conversely, to improve morale. Thus, it provides a contextual framework to explain and describe how two key psychosocial factors (demands, resources) and their combinations predict morale and distress on the one hand and motivation and performance on the other (Bakker & Demerouti, 2007; Demerouti et al., 2001). The two-factor model proposes that employee well-being is related to a range of workplace variables that are conceptualized as either job demands or job resources. Job demands are "those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills and are therefore associated with certain physiological and/or psychological costs" (Bakker & Demerouti, 2007, p. 312). The demanding aspects of an employee's job may lead to constant overtaxing and eventually to exhaustion that may have adverse organizational consequences (e.g., absenteeism: Bakker, Demerouti, de Boer, & Schaufeli, 2003).

On the other hand, job resources are the physical, psychological, social, or organizational aspects of the job that may reduce job demands and the associated physiological and psychological costs, aid in achieving work goals, or stimulate personal growth, learning and development (the motivation process) (Bakker & Demerouti, 2007; Demerouti et al., 2001; Schaufeli & Bakker, 2004). Job resources may be located at the

organizational level (i.e., pay, career opportunities, job security), interpersonal and social relations level (i.e., supervisor and co-worker support, team climate), the level of work organization (i.e., role clarity, participation in decision making), and at the task level (e.g., skill variety, performance feedback) (Bakker & Demerouti, 2007). As job resources may buffer the relationship between job demands and stress reactions (e.g., exhaustion), employees who have high levels of resources available to them are more capable of dealing with demanding work conditions and consequently they experience lower levels of exhaustion (Bakker, Demerouti, Taris, Schaufeli, & Schreurs, 2003). Bakker et al. showed that the relationship between job demands and exhaustion disappeared when homecare workers possessed many resources (i.e., performance feedback, autonomy, or career opportunities).

The flexibility and breadth of the JD-R model allows a choice of work-related factors to be classified as demands and resources. For example, in the university context, a longitudinal test of the JD-R model in a sample of 313 Australian academics found that Time 1 resources (perceptions of procedural fairness, job autonomy) directly predicted Time 2 psychological strain and organizational commitment (Boyd, Bakker, Pignata et al., 2011). Hence, increased opportunities for personal growth, learning and development (the motivational hypothesis), links job resources to beneficial organizational outcomes through morale and positive work attitudes (job satisfaction, organizational commitment). As work environments that offer many resources can foster morale, the stress interventions implemented by university management will reflect the resource component within the JD-R model.

*The University Context*

Recent research on university staff has shown that work-related stress in universities has risen internationally due to increased work pressures and reduced government financial support (Biron, Brun, & Ivers, 2008; Liu, Spector, & Shi, 2008; Taris, Schreurs, & van Iersel-van Silfhout, 2001; Tytherleigh, Jacobs, Webb, Ricketts, & Cooper, 2007). Specific to the Australian context, the negative impact of economic and management imperatives on the health and well-being of academic and non-academic staff in Australian universities has been well documented (Winefield et. al., 2008). A qualitative focus group study of 15 universities showed that university staff experienced high levels of stress, with insufficient funding and resources, increased workloads, poor management practice, reduced prospects for career development, and insufficient recognition and reward being identified as the major sources of stress (Gillespie, Walsh, Winefield, Dua, & Stough, 2001). Consequently, a two-wave longitudinal study of occupational stress was undertaken. The first phase (Time 1) involved surveying all contract and tenured staff at 17 universities. The responding sample of 8,732 participants provided a 25% response rate. The study found that reduced staff numbers, job insecurity, and increasing student numbers contributed to high levels of job strain and low levels of perceived control in university staff (Gillespie et al., 2001; Winefield et al., 2008). Based on those findings and empirical research on work stress, the researchers made recommendations to enable the participating universities to introduce multi-level stress-reduction interventions.

In 2003, a follow up survey was undertaken, and feedback from more than 2500 participants at five universities of the 13 universities that participated in the follow-up study at Time 2 is reported in Part 2 of this article. The assumption motivating this examination is that a more focused, in-depth examination of individual organizations may reveal more about

the effect of interventions on employees than a quantitative analysis alone. We also undertake analyses of longitudinal data from the sample of 969 participants from 13 universities who responded at both the Time 1 and Time 2 waves of the survey in order to determine whether employees at the five universities that participated in the present study showed greater levels of change over time than employees at the eight universities which did not participate in the present study.

*The Present Study*

The present study is comprised of two parts. Part 1 is a qualitative study that aims to contribute to the stress intervention literature by examining the objective measures of stress-reduction strategies implemented at five universities in order to determine: (1) the types of HR interventions and strategies that were implemented by the universities designed to reduce employee-levels of psychological strain and increase positive work-related attitudes; (2) the types of individual-directed, organisation-directed, and individual/organisation interface-directed interventions that were implemented; and (3) the key intervention strategy that was implemented by each university.

Part 2 of the study is a quantitative study that examines employee-level responses at two time-points to determine any changes in employee self-reports of well-being and positive work attitudes. Accordingly, we investigate the following research questions:

*Research Question 1:* Were there any changes in employee-levels of psychological strain, and work-related attitudes?

*Research Question 2:* What types of intervention strategies were effective in lowering psychological strain, and heightening positive work-related attitudes?

*Strain and work-related attitudes*

As well as using strain as an indicator of employee well-being, we used four indicators of organizational well-being: job satisfaction, affective organizational commitment, trust in senior management, and perceived procedural justice. These measures were selected as previous studies (Abouserie, 1996; Dua, 1994; Gillespie et al., 2001; Hartman, Yrle, & Galle, 1999; Taris et al., 2001; Winefield & Jarrett, 2001) have found these attitudes to be of particular importance to university staff, as has research within the current sample (Boyd et al., 2011; Winefield et al., 2008). Psychological strain and the aforementioned work-related attitudes will now be considered.

Psychological strain is characterised as a disturbance in either affect or cognition (Kelloway & Day, 2005) and refers to a response characterised by subjective feelings of distress and other negative symptoms including anxiety, depression and social withdrawal (Massé et al., 1998). Psychological strain has often been investigated as an outcome in work stress research (Mansell, Brough, & Cole, 2006), and given the high levels of job strain reported in the Australian university sector, it is clearly an area that requires further research.

Individual outcomes such as positive work attitudes are beneficial for both employees and organizations. For example, job satisfaction has been referred to as the broad positive emotional reactions and attitudes individuals have towards their jobs (Locke, 1969), and has been identified as a key attitude that leads to positive organizational outcomes such as high productivity, low absenteeism, and low turnover (Iaffaldano & Muchinsky, 1985).

Another optimal outcome for both individual employees and the organization is affective organizational commitment which reflects an individual's identification with and involvement in the organization (Meyer & Allen, 1991). This attitude refers to loyalty to the

employer, because a committed individual: (1) strongly identifies with the organization, accepting its goals and values; (2) exerts effort on its behalf; and (3) values its membership (Mowday, Steers, & Porter, 1979). Employees who are strongly committed are those who are least likely to leave the organization (Allen & Meyer, 1990).

The social interaction processes of trust are also important in employee-employer relationships. Trust has been defined as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer, Davis, & Schoorman, 1995, p. 712). Trust evolves over time through the repeated interactions of values and attitudes within the exchange relationship between employee and organization (Jones & George, 1998), and when employees believe that they receive valued benefits such as trust from their leaders, they tend to develop an obligation to reciprocate and may enhance their job performance in order to repay their leader (Erdogan & Enders, 2007). The focus of trust in the present study is on employee trust in senior management, as senior management have high organizational status and influence within the organization and as a result are associated with higher-level decisions with an organization-wide focus. In the university context, Gillespie et al. (2001) found that university staff associated senior management with the office of the Vice-Chancellor and senior administrators who contribute directly to the organization's key strategic and business decisions. This would suggest that senior management are responsible for implementing and managing organizational and HR policies that aim to improve employee well-being and morale, such as stress-reduction strategies.

Psychosocial theories of fairness and justice are also relevant to understanding work stress (Peiró, 2008). Procedural justice refers to how decisions affecting staff are made

(Greenberg, 1994), and comprises formal organizational policies about processes and decisions (employee voice in the decision process, adequate notice about decisions) and a social component of treating employees with dignity and respect (Rhoades & Eisenberger, 2002). Perceptions of procedural justice help to shape employees' relationships with their employers (Folger & Cropanzano, 1998) and thus have important consequences for employee attitudes such as job satisfaction and organizational commitment, and behaviours such as organizational citizenship behaviour where employees exceed their explicitly required work responsibilities (Konovsky, 2000).

As the abovementioned attitudes are of key importance to university staff, we use a mixed methods approach to identify what types of organizational intervention strategies implemented after the Time 1 survey were effective in lowering employee levels of psychological strain and heightening positive employee attitudes of job satisfaction, organizational commitment, trust in senior management, and perceptions of procedural justice.

## Method

### *Participants and Procedure*

#### *Part 1*

Part 1 is a qualitative survey of five universities across three Australian states in order to identify the HR measures that were undertaken at each university to enhance employee well-being and morale. The five universities were diverse as they included universities established between 1853-1911, and those established between 1988-1992. In 2007, the Vice-Chancellors of the universities who participated at Time 2 were contacted and invited to participate in the present study (see Appendix A). Each nominated a Senior HR Manager or

Health and Safety Director to participate in the research. The nominated managers from five universities were contacted and each agreed to participate in the study (see Appendix B) and each completed an Intervention Evaluation Survey (IES) in 2008 (see Appendix C).

*Measures.* The IES was based on empirical evidence and research by Pignata and Winefield (2006) that identified the specific HR stress management and reduction interventions that were undertaken at one Australian university. Using a participative/ collaborative approach, a preliminary draft of the IES was circulated to all of the nominated university representatives in order to obtain their feedback and to develop the survey further. After including their feedback, the survey was then examined by an independent university HR Director who provided feedback on the survey content only, and did not participate in the study. This feedback was also incorporated into the IES.

The IES comprised two-sections. Section 1 comprised a check list of 11 intervention targets and listed multiple intervention options. The intervention targets and examples of their respective options include: (1) increase awareness of stress and its management – 8 options (e.g., promoted employee assistance program to staff); (2) enhance job design and reduce job pressure – 13 options (e.g., streamlined administrative procedures); (3) improve work-life balance in staff – 10 options (e.g., established/promoted family-friendly provisions); (4) improve communication and consultation with staff – 8 options (e.g., improved all communication processes from management to staff); (5) address tenure concerns – 4 options (e.g., established/reviewed vocational counselling for re-deployees); (6) enhance workplace interpersonal relations – 6 options (e.g., implemented / reviewed workplace bullying and violence policy); (7) enhance the fairness of policies and procedures - 11 options (e.g., increased transparency of performance appraisal procedures); (8) increase

staff levels of trust in senior management – 8 options (e.g., developed leadership capabilities in staff); (9) enhance training, career development and promotional opportunities – 15 options (e.g., established mentoring / coaching program); (10) improve remuneration and recognition practices – 13 options (e.g., implemented / reviewed performance planning and review systems); and (11) improve health and lifestyle in staff – 7 options (e.g., established / reviewed fitness / exercise program).

Section 2 of the IES was an open-ended questionnaire in which senior HR managers were asked to describe a key strategy (program, policy or procedure) that best exemplifies their university's commitment to improving staff well-being and morale. They were also asked to provide details of the strategy's aim, the extent of its coverage, the target group(s), how the at-risk groups were identifed, and which groups were involved in planning and implementing the strategy.

*Analysis.* Data analysis was conducted independently for each case study, both to relate back to the objectives and to draw out policy implications. Detailed investigation of each case allowed us to draw out any unique patterns and the basis for rich cross-case comparison (Eisenhardt, 1989). Following the techniques proposed by Yin (1989), as each additional case was completed, the results were checked to see if they replicate the findings in the previous cases. Once all the cases were completed, cross-case conclusions could be drawn.

*Part 2*

Part 2 is a cross-sectional study of data at two time-points from academic and non-academic employees at the aforementioned five universities. The Time 1 sample of 2751 participants comprised 1262 males (46%) and 1423 females (52%), 66 participants did not

disclose their gender. The sample comprised 1455 academic staff (53%) and 1214 non-academic staff (44%), 82 participants did not disclose their staff group. The Time 2 sample of 2570 participants comprised 914 males (36%) and 1452 females (57%), and 204 participants who did not disclose their gender. The sample comprised 1059 academic staff (41%) and 1323 non-academic staff (52%), 188 participants did not disclose their staff group. Participation in both surveys was anonymous.

Paper surveys were distributed by internal mail in 2000 (Time 1), whereas in 2003 (Time 2), surveys were completed electronically. In regard to these mixed-mode surveys, it should be noted that the measurement equivalence of paper-and-pencil and internet organizational surveys was recently demonstrated in a large-scale examination across 16 countries (De Beuckelaer & Lievens, 2009).

*Measures.* Both the Time 1 and Time 2 survey questionnaires were administered to all staff, and sought general demographic information (i.e., university, gender, tenure and age). The following health and well-being measures, and work-related attitude measures were used in the survey. The five measures of direct relevance, described below, had internal reliabilities between 0.78 and 0.96 (Cronbach's alpha coefficients), thus indicating acceptable reliability (see Tables 9 & 10). The means shown for psychological strain and job satisfaction are based on the total scores, whereas the measures of affective organizational commitment, perceived procedural justice and trust in senior management are based on the item means.

Psychological strain was measured using the 12-item General Health Questionnaire (GHQ-12: Goldberg & Williams, 1988) which is generally accepted as a valid and reliable measure of psychological impairment in Australian samples (Andrews, Hall, Teeson, &

Henderson, 1999). An example item is "Have you recently been feeling unhappy and depressed?" Each item was scored on a 4-point Likert scale (0 = *better than usual*; 3 = *much less than usual*), with higher scores indicating higher levels of distress. Scores on individual items were summed to produce a total score.

Job satisfaction was assessed using the 15-item scale by Warr, Cook, and Wall (1979). An example item is "How satisfied or dissatisfied do you feel with your opportunity to use your abilities?" Each item was scored on a 7-point Likert scale (1 = *extremely dissatisfied*; 7 = *extremely satisfied*), and scores on individual items were summed to produce a total job satisfaction score.

Five items were adapted from Porter, Steers, Mowday and Boulian's (1974) measure of affective organizational commitment to measure the extent to which employees identified with their university and were committed to its goals. An example item is "I really care about the future of this university". Each item was scored on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*).

Trust in senior management was measured using an eight-item scale developed from Mayer and Davis (1999) and Butler (1991). An example item is "Senior Management of my University treat staff fairly". Each item was scored on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*).

Perceptions of procedural justice were assessed using four items from a scale developed from focus group discussions with university staff (Gillespie et al., 2001). The items asked staff to rate the fairness of performance appraisal, appointments, promotions, and redundancy procedures in their workplace. An example item is "In my university, promotions procedures are fair". Each item was scored on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*).

## Results

*Part 1*

Table 1 lists the key types of HR intervention strategies that were implemented at the five universities between 2000 and 2003. In order to determine the level at which the interventions are targeted, the intervention strategies are classified into the categories of individual, organization, or individual/organization interface interventions.

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Insert Table 1 about here

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As shown in Table 1, the key areas targeted by HR management across the universities, were strategies to enhance training, career development and promotional opportunities for staff (35 strategies); and improve remuneration and recognition practices (35). Other key strategies aimed to improve work-life balance (29), and to enhance the fairness of policies and procedures (27). The total number of HR interventions implemented at each university during this period ranged from 37 to 51 strategies.

Table 1 also shows that the majority of interventions implemented were focussed at the organizational level and aimed at eliminating, reducing or altering stressors at work. These strategies include: improving training, career, and promotion opportunities; enhancing remuneration and recognition practices and work-life balance strategies; enhancing procedural justice and increasing trust in senior management; redesigning jobs; enhancing communication and consultation processes; and addressing job security and tenure concerns. Strategies to increase employee awareness of stress and the management of stress were classified as both individual and organization directed interventions, and strategies to

enhance interpersonal relationships were the only individual/organization interface directed strategies that were implemented. In addition, interventions addressing employee health and lifestyle factors were the single type of individual-directed strategies that were implemented.

Each university HR manager also provided details of the priority strategies that were implemented at their university. Moreover, they listed each strategy's aim, extent, target group, and the planning and implementation process that was undertaken in order to appreciate fully the extent of the intervention strategy.

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Insert Table 2 about here

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Table 2 shows that the majority of priority strategies implemented at three universities were leadership development and management skills programs to enhance the capacity of leaders, specifically Heads of Departments, to manage employees. The principal aims of these strategies were to improve the ability of supervisors and managers to effectively deal with staff, improve the commitment and morale of all staff, and to improve outcomes including the management of stress. The priority intervention implemented at one university was a university wide strategy for the early intervention and management of stress claims in order to increase an awareness of the resources available to staff (and supervisors) and to assist in the early identification and reporting of stress and stress situations. The other key priority intervention strategy was a university wide restructuring of academic portfolios to streamline systems and administration processes within the university.

Each HR manager provided details of the specific HR strategies undertaken at their university designed to improve employee well-being and morale by (1) raising the awareness

of stress, (2) redesigning jobs or reducing work pressure, (3) addressing tenure concerns, (4) improving work-life balance, (5) improving consultation and communication processes, (6) enhancing interpersonal relationships, (7) increasing levels of trust in senior management, (8) enhancing training and promotional opportunities, (9) enhancing fair procedures, (10) improving remuneration and recognition practices, and (11) improving employee health and lifestyle (see Tables 3–7).

Insert Table 3 about here

In terms of strategies to raise awareness of stress and its management, Table 3 shows that each university established, reviewed and/or promoted Employee Assistance Programs (EAP) or Critical Incident Stress Management (CISM) programs to assist employees to deal with the normal physical and emotional reactions that may result from critical incidents at work. Job redesign strategies to streamline administrative processes and to assist new employees featured strongly at four of the universities (it should be noted that University C was not able to provide a response regarding job redesign strategies). Improved communication processes regarding the renewal or non-renewal of staff contracts were undertaken by the majority of the universities.

Insert Table 4 about here

Table 4 shows that interventions to improve work-life balance were widespread, as each university established or promoted family-friendly policies and working arrangements, and strategies to monitor absenteeism or encourage staff to take accrued leave. Strategies to improve consultation and all communication processes from management to staff were implemented at the majority of universities.

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Insert Table 5 about here

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Table 5 lists the strategies implemented to enhance interpersonal relationships and increase staff levels of trust in senior management. The implementation or review of equal opportunity, workplace bullying and violence, and discrimination and harassment policies were undertaken by the majority of the universities. A focus on leadership development and mentoring of staff for leadership positions was highlighted by four of the universities.

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Insert Table 6 about here

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As can be observed in Table 6, interventions to enhance training, career development and promotional opportunities for staff, particularly management, were the predominant strategies implemented or reviewed by all of the universities. Specifically, management-directed training in performance management, change management, time management, interpersonal skills, and training for middle management in management skills were widespread across all universities.

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Insert Table 7 about here

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Table 7 shows that the majority of the strategies to enhance the fairness and openness of procedures were those to review recruitment, selection and appointment policies; review

promotion procedures for academic staff; provide clearly stated promotions criteria and constructive feedback to unsuccessful candidate/s; and implement or review the performance management system. All five universities implemented multiple strategies to recognise staff and improve remuneration practices. Chief among these were implementing or reviewing performance planning and review systems, developing or improving processes for recognising excellence in teaching, and recognising staff in teaching awards or grants. Only two universities attempted to enhance employees' health and lifestyle directly, by implementing meditation and/or fitness/exercise programs.

*Part 2*

*Longitudinal Analyses.*

We examined data from the 969 participants from 13 universities who responded at both waves of the survey to determine whether employees at the five universities ($n$ = 360) in the present study showed greater levels of change over time than employees at the eight non-participating universities ($n$ = 585). Using a mixed 2 x 2 between-within ANOVA we explored the effect of participant status (yes, no) and time (1, 2) on levels of psychological strain, job satisfaction, organizational commitment, trust in senior management, and perceptions of procedural justice. As shown in Table 8, there were no significant interaction effects; thus, the universities that took part in the present study did not show greater levels of change on these variables between Time 1 and Time 2 than those who did not. However, the main effect of time was a significant effect for psychological strain, job satisfaction, trust in senior management, and procedural justice. The main effect of participant status was not significant.

The results of paired-samples *t*-tests showed increases in psychological strain for both university Groups from Time 1 to Time 2. For Group 1 (the participating 5 universities) there were no changes in job satisfaction, procedural justice or trust in senior management, whereas for Group 2 (the 8 universities that did not participate) there was an increase in trust in senior management. The *t*- test results (all two-tailed) are as follows:

(1) Group 1, there were significant increases in: strain, $t(309) = -2.073$, $p < .05$; and the difference for procedural justice approached significance, $t(328) = -1.89$, $p = .06$. The differences for job satisfaction and trust in senior management were *ns*, $p > .05$.

(2) Group 2, there were significant increases in: strain, $t(517) = -2.72$, $p < .01$ and trust in senior management, $t(536) = -3.07$, $p < .01$. The differences for job satisfaction and procedural justice were *ns*, $p > .05$.

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Insert Table 8 about here

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*Correlational Analyses*

Analyses were performed using SPSS Statistics 17.0 software. The aim was to examine employee-level responses to determine any changes in employee self-reports of well-being and work-related attitudes. Tables 9 and 10 present the means, standard deviations, internal reliability coefficients, and bivariate correlations for the well-being (psychological strain) and attitude measures (job satisfaction, organizational commitment, trust in senior management, procedural justice) for the total participant pool in both surveys.

Insert Table 9 about here

Insert Table 10 about here

Insert Table 11 about here

*Cross-Sectional Analysis*

An independent samples *t*-test was employed to compare the mean scores for the Time 1 and Time 2 groups for each university. As can be observed in Table 11, the analyses revealed that between 2000 and 2003, employee levels of psychological strain were higher at four of the universities (A, B, C, & D). Employee levels of job satisfaction were lower at two of the universities (A & B), and higher at University D. Employee perceptions of procedural justice were higher at all five universities, and employee levels of organizational commitment and trust in senior management were both higher at four universities (A, C, D, & E). There was a decline in employee levels of commitment and trust in senior management at University B.

## Discussion

The key purpose of this study was to investigate potential relationships between objective measures of intervention strategies at an organizational level and psychological

strain and positive work-related attitudes. Across the universities, the dominant types of interventions were strategies to: enhance training, career development and promotional opportunities for staff; improve remuneration and recognition practices; improve work-life balance for staff; and to enhance the fairness of organizational policies and procedures.

The total number of HR interventions implemented at each university during this period ranged from 37–51 strategies (see Table 1). The largest number of interventions was implemented by University D which implemented 51 strategies and University E implemented 48 strategies, with a third of the strategies for both universities targeting training, career, and promotion opportunities; and the redesign of jobs. Indeed, across the universities, University E showed the most promising results in terms of no changes in employee-levels of psychological strain and job satisfaction, and higher levels of perceived procedural justice, trust in senior management and commitment to the organization.

Given that a comprehensive review of work stress preventive interventions by Kompier and Kristensen (2001) showed that the majority of interventions to prevent mental health problems at work are individual and reactive strategies, it is noteworthy that the intervention strategies implemented by university management were predominantly primary intervention strategies focussed at the organizational level and aimed at eliminating, reducing or altering stressors at work. The strategies included: improving training, career, and promotion opportunities; enhancing remuneration and recognition practices and work-life balance strategies; enhancing procedural justice and increasing trust in senior management; redesigning jobs; and enhancing communication and consultation processes. Indeed, each of the participating universities implemented multi-level intervention strategies to improve employee well-being and morale which is consistent with prior research that shows that the

most effective intervention strategies are multi-level interventions that combine organizational as well as individual strategies (Nytrø et al., 2000).

The results of the qualitative study show that the key priority areas targeted by HR management across the universities were strategies to enhance the capacity of leaders, specifically Heads of Departments, to manage employees, improve employee commitment and morale, and improve outcomes including the management of stress (see Table 2). Such strategies were listed as priorities at three of the five universities (A, D, E), and employees at those universities heightened their already high levels of perceived procedural justice, commitment to the organization, and trust in senior management (see Table 11). In addition, senior management at University C implemented a university wide strategy for the early intervention and management of stress claims in order to increase an awareness of the resources available to staff (and supervisors) and to assist in the early identification and reporting of stress and stress situations. It is noteworthy that in comparison to employees at the other universities in 2003, employees at University C reported the lowest level of psychological strain.

The quantitative study found changes between 2000 and 2003 in terms of employee-levels of psychological strain, job satisfaction, organizational commitment, trust in senior management, and perceptions of procedural justice. Analyses revealed that during this period employee levels of psychological strain were higher at four out of the five universities (A, B, C, & D), and employee levels of job satisfaction were lower at two of the universities (A & B). Whilst these adverse results are of concern, it is important to note that employee perceptions of procedural justice were higher at all five universities. In addition, employee levels of affective organizational commitment and trust in senior management were higher at four of the universities (A, C, D & E), and job satisfaction was also higher at University D.

However, there was a decline in employee levels of organizational commitment and trust in senior management at University B. It should be noted that prior to the 2003 survey, University B restructured academic portfolios across the university in order to streamline processes and administration systems within the university. Whilst employees reported higher perceptions of procedural justice it is not surprising that there may have been negative consequences of the restructure as employees reported higher levels of psychological strain, and lower levels of job satisfaction, affective organizational commitment and trust in senior management.

Positive employee-level outcomes include the higher level of perceptions of procedural justice at all universities, suggesting a trend as a high number of HR measures were aimed specifically at increasing procedural justice perceptions (see Table 7). For example, all of the universities reviewed the fairness and openness of promotion procedures for academic staff, and four of the universities reviewed or implemented their grievance procedures and performance management systems, and increased the transparency of performance appraisal procedures. This finding of higher levels perceptions of fair and just procedures has potential for positive consequences for employee attitudes such as increased organizational commitment (Boyd, Bakker, Pignata, et al., 2011) and behaviors such as organizational citizenship behavior (Konovsky, 2000).

The higher levels of trust in senior management may also indicate a trend as the majority of the universities implemented measures to develop the leadership capabilities of staff, and implemented and/or reviewed the training and mentoring of staff for leadership positions. Moreover, prominent HR measures such as increasing employees' training and career development opportunities, and improving remuneration and recognition practices may be linked to higher levels of trust and affective organizational commitment at four of the

universities. Indeed, this finding is consistent with the trust literature as a recent meta-analytic review found a positive relationship between trust in leadership and organizational commitment, organizational citizenship behavior, job satisfaction, and intention to stay (Dirks & Ferrin, 2002).

In terms of the JD-R theoretical model, increasing job resources in the form of enhancing employees' training and career development opportunities, and improving remuneration and recognition practices may have led to increased opportunities for personal growth, learning and development (the motivational hypothesis) and to positive organizational outcomes through increased morale and positive work attitudes (i.e., increased commitment to the organization). However, areas of concern include the growing levels of psychological strain since 2000 at the majority of the universities, and the lower levels of job satisfaction for employees at two of the universities.

*Implications for Practice*

It is intuitively appealing to consider that implementing interventions should reduce occupational stress. However, as demonstrated by the negative results shown by University B, it is possible that the introduction of the university's restructuring of organizational units which was undertaken prior to the 2003 survey, adversely affected employee levels of well-being and morale. As a result, it is necessary to examine the context in which employees are working. Indeed, on the basis of eleven European case studies, Kompier and Cooper (1999) emphasize that interventions need to be context-specific and accurately assess both individual and organizational factors which are crucial to the intervention's success.

The results suggest that some HR intervention strategies may have led to desirable employee and organizational outcomes which has practical implications for management,

particularly HR management, as the motivating potential of HR job resources should be acknowledged and exploited. Beneficial outcomes for both the employee and the organization may be achieved if organizations implement targeted strategies to increase well-being and morale, and communicate and promote the measures taken by HR departments to employees. It appears that resources were targeted specifically to increase employee perceptions of procedural justice and leadership development and training. As a result, higher levels of perceived procedural justice, trust in senior management, and organizational commitment may also enhance our understanding of the organizational-attachment process. The results imply that a focus on stress prevention and management and improving the quality of the relationships between employees and senior management in terms of increased strategies to procedural justice, trust and commitment to the organization, may lead to positive HR benefits for employees and organizations

*Strengths and Limitations*

A strength of the study is that the data were based on two large cross-sectional samples totalling more than 5300 employees, from five widespread universities. Our findings allow for generalization beyond a specific company or profession as both the Time 1 and Time 2 samples contained over 2500 non-academic employees who worked in the diverse occupational roles of professional (e.g., accountant, librarian), clerical / administrative, technical (e.g., computer technician), and service (e.g., cleaners, security) staff. As a result, this study takes a step in advancing the link between employee reports of well-being and morale and organizational interventions.

However, there are limitations that need to be acknowledged. First, psychosocial work factors and health were measured by self-report. In addition, our intervention study

obtained objective evidence of university-wide interventions only, but there may have been variations between departments in the type or extent of the stress-reduction strategies undertaken. Hence, further research should be aimed at a departmental level using an appropriate sample size to investigate the specific faculties / organizational units within each university, and obtain details of specific targeted interventions.

*Directions for Future Research*

To build confidence in the validity of these findings, potential relationships between occupational stress and objective measures should be investigated in other organizational contexts, to determine whether these results are widespread in other work settings. In conclusion, the JD-R theoretical framework appears to be evident in the employee-organization relationship in university settings as these findings suggest that universities and other organizations can attain favourable outcomes if targeted resources, such as HR interventions, are implemented. However, more evaluative research on the effectiveness of stress interventions is needed urgently to assist HR management, both in universities and other organizations, to address issues relating to work stressors and refine current strategies or implement new strategies to promote employee well-being and positive attitudes in order to attain healthy work environments.

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Table 1

*Number and Type of Strategies Implemented and their Target Level*

| University | | | | | | |
|---|---|---|---|---|---|---|
| **Intervention Focus and Target Level** | **A** | **B** | **C** | **D** | **E** | **Total (rank order)** |
| Training /Career / Promotion ***Organization Level*** | 4 | 8 | 4 | 10 | 9 | 35 |
| Remuneration / Recognition ***Organization Level*** | 5 | 9 | 11 | 4 | 6 | 35 |
| Work-Life Balance ***Organization Level*** | 8 | 3 | 7 | 7 | 4 | 29 |
| Procedural Justice ***Organization Level*** | 4 | 5 | 5 | 7 | 6 | 27 |
| Job Design ***Organization Level*** | 5 | 3 | – | 8 | 7 | 23 |
| Communication/ Consultation ***Organization Level*** | 5 | 5 | – | 5 | 5 | 20 |
| Stress Awareness/ Management ***Individual & Organization Level*** | 3 | 3 | 5 | 4 | 3 | 18 |
| Trust in Senior Management ***Organization Level*** | 3 | 4 | – | 3 | 3 | 13 |
| Interpersonal Relations ***Individual/Organization Interface*** | 2 | 1 | 5 | 2 | 3 | 13 |
| Job security / Tenure ***Organization Level*** | 1 | 2 | – | 1 | 2 | 6 |
| Health and Lifestyle ***Individual Level*** | 1 | 1 | – | – | – | 2 |
| Total | 41 | 44 | 37 | 51 | 48 | 221 |

Table 2

*Priority Strategies: Aims, Coverage, Targets, and Planning and Implementation Processes*

| | UNIVERSITY | | | |
|---|---|---|---|---|
| **A** | **B** | **C** | **D** | **E** |
| **KEY PRIORITY** | | | | |
| Improved leadership and management skills | Portfolio Services Integration Project - moved to streamline academic portfolios and integrate support services | Early intervention and management of stress claims | Leadership programs for academic staff to assist in managing departments, including coaching, self awareness training and impact of behaviours on others. | Management and leadership development |
| **PRINCIPAL AIM** | | | | |
| Leadership training to improve supervisors' and managers' ability to effectively manage and deal with staff | To streamline the systems, processes that support the administration of the academic portfolios and eliminate duplication of work | Increased awareness of resources available to staff (and supervisors) to assist them to identify and report early signs of stress and case manage stress situations | Improving commitment and morale of all staff | To improve outcomes including the management of stress by developing leadership and management skills |
| **EXTENT OF COVERAGE** | | | | |
| Leadership training aimed at all supervisors and managers | University wide | University wide | All Heads of Academic Departments and future Heads of Departments | University wide |
| **TARGET** | | | | |
| Aimed at all supervisors and managers | _ | All staff including managers | Academic Staff only | Managers and Heads of Schools |
| **HOW AT-RISK GROUPS IDENTIFIED** | | | | |
| Working Life survey and feedback from staff and management | Whole of university project | Holistic approach | Previous attempts to introduce the progam | Focus group findings identified a need for general development |
| **GROUPS INVOLVED IN PLANNING** | | | | |
| Management and staff | Management and staff | Management and staff | Management only | Management and staff |
| **GROUPS INVOLVED IN IMPLEMENTATION** | | | | |
| Management and staff | Management and staff | Management and staff | Management , Academic Heads of Department, HR | Management only |

Table 3

*Details of Interventions to Manage Stress, Enhance Job Design, and Address Tenure Concerns*

| UNIVERSITY | | | | |
|---|---|---|---|---|
| **A** | **B** | **C** | **D** | **E** |
| **STRESS AWARENESS RAISING AND MANAGEMENT** | | | | |
| • Established/ reviewed Employee Assistance Program (EAP)<br>• Promoted EAP to staff<br>• Conducted climate/stress surveys of staff | • Established/ reviewed EAP<br>• Promoted EAP to staff<br>• Implemented/ reviewed Critical Incident Stress Management (CISM) or counselling program | • Established/ reviewed EAP<br>• Promoted EAP to staff;<br>• Implemented /reviewed management-directed training in stress awareness<br>• Implemented/ reviewed staff-directed training in stress management (coping skills)<br>• Implemented/ reviewed CISM or counselling program | • Implemented/ reviewed management-directed raining in stress awareness<br>• Implemented/ reviewed staff-directed training in stress management (coping skills)<br>• Implemented/reviewed CISM or counselling program<br>• Implemented /reviewed management-directed training in CISM services | • Established/ reviewed EAP<br>• Promoted EAP to staff<br>• Conducted climate/ stress surveys of staff |
| **ENHANCING JOB DESIGN AND REDUCING JOB PRESSURE** | | | | |
| • Streamlined administrative procedures<br>• Implemented/ reviewed job redesign & classification policies<br>• Reviewed job descriptions regularly<br>• Implemented/ reviewed induction & orientation programs for new staff<br>• Improved physical working environments | • Streamlined administrative procedures<br>• Implemented/ reviewed job redesign & classification policies<br>• Implemented/ reviewed induction & orientation programs for new staff | Unable to respond | • Increased access to resources (teaching and research) for academic staff<br>• Increased academic staffing resources<br>• Increased non academic staffing resources<br>• Reduced student/staff ratio for academic staff<br>• Streamlined administrative procedures<br>• Reviewed job descriptions regularly<br>• Implemented/ reviewed induction & orientation programs for new staff<br>• Improved physical working environments | • Increased access to resources (teaching and research) for academic staff<br>• Reduced student/staff ratio for academic staff<br>• Streamlined student assessment procedures<br>• Prioritised job responsibilities<br>• Reviewed job descriptions regularly<br>• Improved physical working environments<br>• Performance & development process |
| **ADDRESSING TENURE CONCERNS** | | | | |
| • Improved communication processes regarding renewal or non-renewal of staff contracts | • Improved communication processes regarding renewal or non-renewal of staff contracts<br>• Implemented/ reviewed redundancy & redeployment policies | Unable to respond | • Improved communication processes regarding renewal or non-renewal of staff contracts | • Improved communication processes regarding renewal or non-renewal of staff contracts<br>• Tightening of fixed term contract criteria |

Table 4

*Details of Interventions to Enhance Work-Life Balance and Communication*

| | UNIVERSITY | | | |
|---|---|---|---|---|
| **A** | **B** | **C** | **D** | **E** |
| **WORK-LIFE BALANCE AND FAMILY FRIENDLY POLICIES** | | | | |
| • Established/ promoted family-friendly provisions<br>• Established/ promoted fractional employment practices<br>• Established/ promoted flexible working hour practices<br>• Established/ promoted job sharing practices<br>• Established/ promoted 48/52 arrangements<br>• Established/ promoted work from home agreements<br>• Monitored absenteeism<br>• Encouraged staff to take accrued leave | • Established/ promoted family-friendly provisions<br>• Established/ promoted 48/52 arrangements<br>• Monitored absenteeism | • Established/ promoted fractional employment practices<br>• Established/ promoted flexible working hour practices<br>• Established/ promoted rostered day off arrangements<br>• Established/promoted job sharing practices<br>• Established/promoted 48/52 arrangements<br>• Established/promoted work from home agreements<br>• Encouraged staff to take accrued leave | • Established/ promoted fractional employment practices<br>• Established/ promoted flexible working hour practices<br>• Established/ promoted rostered day off arrangements<br>• Established/ promoted job sharing practices<br>• Established/ promoted 48/52 arrangements<br>• Established/ promoted work from home agreements<br>• Encouraged staff to take accrued leave | • Established/ promoted fractional employment practices<br>• Established/ promoted flexible working hour practices<br>• Established/ promoted 48/52 arrangements<br>• Encouraged staff to take accrued leave |
| **IMPROVING COMMUNICATION AND CONSULTATION WITH STAFF** | | | | |
| • Improved all communication processes from management to staff<br>• Provided regular updates about organizational objectives/vision/ targets<br>• Increased staff consultation regarding workplace relations<br>• Provided positive feedback for good performance<br>• Introduced Performance Development Review for all staff | • Improved all communication processes from management to staff<br>• Provided regular updates about organizational objectives/vision/targets<br>• Increased staff consultation and voice in promotion, performance & redundancy procedures<br>• Increased staff consultation regarding workplace relations<br>• Increased staff consultation in management of organizational change | Unable to respond | • Implemented/ reviewed management-directed training in efffective communication skills/styles<br>• Provided regular updates about organizational objectives/vision/ targets<br>• Increased staff consultation regarding workplace relations<br>• Increased staff consultation in management of organizational change<br>• Provided positive feedback for good performance | • Provided regular updates about organizational objectives/vision/targets<br>• Increased staff consultation & voice in promotion, performance & redundancy procedures<br>• Increased staff consultation regarding workplace relations<br>• Increased staff consultation in management of organizational change<br>• Provided positive feedback for good performance |

Table 5

*Details of Interventions to Enhance Interpersonal Relationships and Trust*

| UNIVERSITY | | | | |
|---|---|---|---|---|
| **A** | **B** | **C** | **D** | **E** |
| **ENHANCING WORKPLACE INTERPERSONAL RELATIONS** | | | | |
| • Implemented/ reviewed workplace bullying & violence policy<br>• Implemented/ reviewed discrimination & harassment policy | • Implemented/ reviewed staff social activities | • Implemented/ reviewed equal opportunity policy<br>• Implemented/ reviewed workplace bullying & violence policy<br>• Implemented /reviewed discrimination & harassment policy<br>• Implemented/ reviewed conflict identification policy<br>• Implemented/ reviewed mediation & conflict resolution policy | • Implemented/ reviewed equal employment opportunity<br>• Implemented/ reviewed discrimination & harassment policy | • Implemented/ reviewed equal opportunity policy<br>• Implemented/ reviewed workplace bullying & violence policy<br>• Implemented/ reviewed discrimination & harassment policy |
| **INCREASING STAFF TRUST IN SENIOR MANAGEMENT** | | | | |
| • Developed leadership capabilities in staff<br>• Implemented/reviewed training & mentoring of staff for leadership positions<br>• Increased transparency of management decision making | • Developed leadership capabilities in staff<br>• Reviewed selection of staff for leadership positions<br>• Implemented / reviewed training & mentoring of staff for leadership positions<br>• Implemented / reviewed management reporting timeframes | Unable to respond | • Developed leadership capabilities in staff<br>• Implemented/ reviewed training & mentoring of staff for leadership positions<br>• Implemented/reviewed management reporting timeframes | • Developed leadership capabilities in staff<br>• Reviewed selection of staff for leadership positions<br>• Implemented/ reviewed training & mentoring of staff for leadership positions |

Table 6

*Details of Interventions to Enhance Training and Promotional Opportunities*

| UNIVERSITY | | | | |
|---|---|---|---|---|
| **A** | **B** | **C** | **D** | **E** |
| **ENHANCING TRAINING, DEVELOPMENT, AND PROMOTIONAL OPPORTUNITIES** | | | | |
| • Implemented/ reviewed management-directed training in performance management<br>• Implemented/ reviewed training for middle management in management skills<br>• Established networking/ peer support systems<br>• Established mentoring/ coaching program(s) | • Implemented/ reviewed management-directed training in performance management<br>• Implemented/ reviewed management-directed training in change management<br>• Implemented/ reviewed management-directed training in time management<br>• Implemented/ reviewed management-directed training in interpersonal skills<br>• Implemented/ reviewed training for middle management in management skills<br>• Increased staff training & development opportunities<br>• Established mentoring/ coaching program(s)<br>• Implemented/ reviewed financial support for higher degree study | • Increased staff training & development opportunities<br>• Implemented/ reviewed financial support for higher degree study<br>• Implemented/ reviewed assisted leave for higher degree study<br>• Ensured clear promotion paths for academic staff | • Implemented/ reviewed management-directed training in performance management<br>• Implemented/ reviewed management-directed training in change management<br>• Implemented/ reviewed management-directed training in time management<br>• Implemented/ reviewed management-directed training in interpersonal skills<br>• Implemented/ reviewed management skills training for middle management<br>• Increased staff training & development opportunities<br>• Established networking/ peer support systems<br>• Established mentoring/ coaching program(s)<br>• Increased career opportunities<br>• Ensured clear promotion paths for academic staff | • Implemented/ reviewed management-directed training in performance management<br>• Implemented/ reviewed management-directed training in change management<br>• Implemented/ reviewed management-directed training in time management<br>• Implemented/ reviewed management-directed training in interpersonal skills<br>• Implemented/ reviewed management skills training for middle management<br>• Increased staff training & development opportunities<br>• Established mentoring/ coaching program(s)<br>• Implemented/ reviewed financial support for higher degree study<br>• Ensured clear promotion paths for academic staff |

Table 7

*Details of Interventions to Enhance Fair Procedures, Remuneration, Recognition, and Health*

| | UNIVERSITY | | | |
|---|---|---|---|---|
| **A** | **B** | **C** | **D** | **E** |
| **ENHANCING FAIRNESS OF POLICIES AND PROCEDURES** | | | | |
| • Reviewed fairness & openness of promotion procedures for academic staff<br>• Implemented/reviewed grievance procedures<br>• Implemented/reviewed performance management system<br>• Increased transparency of performance appraisal procedures | • Reviewed fairness & openness of recruitment, selection and appointment policies<br>• Reviewed fairness and openness of promotion procedures for academic staff<br>• Provided clearly stated promotions criteria and constructive feedback to unsuccessful candidate/s<br>• Increased transparency of redundancy procedures<br>• Reviewed fairness of redundancy procedures | • Reviewed fairness & openness of promotion procedures for academic staff<br>• Implemented/reviewed grievance procedures<br>• Implemented/reviewed performance management system<br>• Increased transparency of performance appraisal procedures | • Reviewed fairness & openness of promotion procedures for academic staff<br>• Implemented/reviewed grievance procedures<br>• Implemented/reviewed performance management system<br>• Increased transparency of performance appraisal procedures | • Reviewed fairness & openness of promotion procedures for academic staff<br>• Implemented/reviewed grievance procedures<br>• Implemented/reviewed performance management system<br>• Increased transparency of performance appraisal procedures |
| **IMPROVING REMUNERATION AND RECOGNITION PRACTICES** | | | | |
| • Implemented/ reviewed performance planning & review systems<br>• Implemented/ reviewed staff reward schemes<br>• Developed/improved processes for recognising excellence in teaching<br>• Teaching awards<br>• Professional development fund/ award | • Implemented/ reviewed performance planning & review systems<br>• Developed/ improved processes for recognising excellence in teaching<br>• Developed/ improved recognition processes for research excellence<br>• Vice-Chancellor award(s), letter<br>• Teaching awards/grants<br>• Research awards<br>• Excellence awards: non academic staff<br>• Professional development fund<br>• Long Service Awards | • Initiated pay equity measures<br>• Implemented/reviewed performance planning & review systems<br>• Developed/ improved processes for recognising teaching excellence<br>• Developed/ improved recognition processes for research excellence<br>• Developed/ improved recognition for excellence in administration<br>• Vice-Chancellor award(s), letter<br>• Teaching awards<br>• Research awards<br>• Excellence awards: non academic staff<br>• Professional development fund<br>• Long ServiceAward | • Implemented/ reviewed performance planning & review systems<br>• Developed/ improved processes for recognising excellence in teaching<br>• Teaching awards<br>• Long Service Awards | • Implemented/ reviewed performance planning & review systems<br>• Developed/ improved processes for recognising excellence in teaching<br>• Developed /improved processes for recognising excellence in administration<br>• Teaching awards<br>• Research awards /grants<br>• Excellence awards: non academic staff |
| **IMPROVING HEALTH AND LIFESTYLE** | | | | |
| • Established/ reviewed meditation program | • Established/reviewed fitness/ exercise program | | | |

Table 8

*Means, SDs for Universities that Participated in the Present Study Compared with those that did not Participate*

| | | Participation in Current Study | | | | Results of ANOVA | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Yes[1] | | No[2] | | Time | | Time x Participation | | Participation | |
| **Dependent Variable** | **Time** | *Mean* | *SD* | *Mean* | *SD* | *F(df)* | $\eta^2$ | *F (df)* | $\eta^2$ | *F (df)* | $\eta^2$ |
| Psychological Strain | 1 | 13.19 | 6.18 | 13.22 | 5.63 | 11.17*** (1,826) | .01 | 0.03 (1,826) | .00 | .00 (1,826) | .00 |
| | 2 | 14.08 | 6.48 | 14.03 | 6.58 | | | | | | |
| Job Satisfaction | 1 | 66.32 | 12.94 | 66.68 | 13.55 | 4.52* (1,830) | .01 | 0.01 (1,830) | .00 | .20 (1,830) | .00 |
| | 2 | 65.35 | 13.43 | 65.80 | 15.42 | | | | | | |
| Organizational Commitment | 1 | 3.48 | 0.68 | 3.50 | 0.69 | 0.49 (1,888) | .00 | 1.59 (1,888) | .00 | .87 (1,888) | .00 |
| | 2 | 3.47 | 0.82 | 3.54 | 0.77 | | | | | | |
| Trust in Senior Management | 1 | 2.59 | 0.83 | 2.51 | 0.87 | 6.97** (1,861) | .01 | 1.30 (1,861) | .00 | .76 (1,861) | .00 |
| | 2 | 2.64 | 0.95 | 2.62 | 0.92 | | | | | | |
| Procedural Justice | 1 | 2.91 | 0.82 | 2.93 | 0.80 | 4.61* (1,856) | .01 | 0.62 (1,856) | .00 | .01 (1,856) | .00 |
| | 2 | 3.00 | 0.97 | 2.97 | 0.98 | | | | | | |

[1]$N = 360$; [2]$N = 585$.

*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

Table 9

*Means, SDs, and Inter-Correlations for Time 1 Variables*

| **Variable** | *Mean*[a] | *SD* | α | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|---|
| Gender | 1.53 | 0.50 | — | | | | | | |
| Staff Group | 1.45 | 0.50 | — | .28** | | | | | |
| T1 Psychological Strain | 13.10 | 5.93 | .90 | -.03 | -.02 | | | | |
| T1 Job Satisfaction | 65.37 | 14.15 | .88 | .14** | .11** | -.40** | | | |
| T1 Organizational Commitment | 3.42 | 0.70 | .78 | .03 | .03 | -.18** | .45** | | |
| T1 Trust in Senior Management | 2.57 | 0.87 | .96 | .08** | .08** | -.24** | .55** | .49** | |
| T1 Procedural Justice | 2.92 | 0.71 | .78 | .02 | .00 | -.28** | .71** | .41** | .57** |

*Note*. $N$ = 2585–2722. [a]For PS and JS, item scores were summed. Item scores were averaged for organizational commitment, trust and justice.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 10

*Means, SDs, and Inter-Correlations for Time 2 Variables*

| **Variable** | *Mean*[a] | *SD* | α | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|---|
| Gender | 1.61 | 0.49 | — | | | | | | |
| Staff Group | 1.56 | 0.50 | — | .20** | | | | | |
| T2 Psychological Strain | 14.68 | 6.73 | .91 | .01 | -.03 | | | | |
| T2 Job Satisfaction | 64.53 | 15.51 | .89 | .05* | .01 | -.45** | | | |
| T2 Organizational Commitment | 3.48 | 0.78 | .82 | .02 | -.03 | -.19** | .44** | | |
| T2 Trust in Senior Management | 2.63 | 0.97 | .96 | .06* | -.02 | -.23** | .58** | .52** | |
| T2 Procedural Justice | 3.15 | 0.91 | .81 | .02 | .04 | -.30** | .68** | .32** | .55** |

*Note*. $N$ = 1860–2382. [a]For PS and JS, item scores were summed. Item scores were averaged for organizational commitment, trust and justice.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 11

*Mean Responses and t Tests Results for Differences in Strain and Work Attitudes*

| | **Psychological Strain** | | | **Job Satisfaction** | | | **Organizational Commitment** | | | **Trust in Senior Management** | | | **Procedural Justice** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | T1 | T2 | | T1 | T2 | | T1 | T2 | | T1 | T2 | | T1 | T2 | |
| **UNI.** | *M* *(SD)* | *M* *(SD)* | *t* *(df)* | *M* *(SD)* | *M* *(SD)* | *t* *(df)* | *M* *(SD)* | *M* *(SD)* | *t* *(df)* | *M* *(SD)* | *M* *(SD)* | *t* *(df)* | *M* *(SD)* | *M* *(SD)* | *t* *(df)* |
| A | 12.75 (5.68) | 14.80 (6.74) | -5.41*** (860) | 68.69 (13.16) | 66.64 (15.86) | 2.31* (882) | 3.62 (.66) | 3.75 (.73) | -3.12** (980) | 2.94 (.78) | 3.06 (.87) | -2.37* (960) | 3.10 (.67) | 3.37 (.92) | -5.59*** (869) |
| B | 13.32 (6.04) | 15.11 (6.79) | -5.35*** (1272) | 62.85 (14.18) | 59.81 (15.06) | 4.01*** (1356) | 3.29 (.70) | 3.17 (.79) | 3.18** (1404) | 2.42 (.80) | 2.15 (.93) | 6.12*** (1371) | 2.77 (.70) | 2.90 (.89) | -3.26** (1426) |
| C | 12.87 (6.09) | 13.94 (6.70) | -2.09* (610) | 65.74 (15.73) | 66.52 (15.60) | -0.62 (616) | 3.41 (.67) | 3.55 (.71) | -2.58** (644) | 2.23 (.95) | 2.66 (.93) | -5.80*** (639) | 2.89 (.73) | 3.19 (.86) | -4.85*** (655) |
| D | 12.87 (5.83) | 14.13 (6.54) | -2.75** (587) | 66.26 (13.35) | 69.08 (13.16) | -2.88** (655) | 3.48 (.72) | 3.66 (.66) | -3.65*** (713) | 2.66 (.87) | 3.00 (.78) | -5.75*** (727) | 3.03 (.68) | 3.38 (.82) | -6.35*** (623) |
| E | 13.97 (6.08) | 15.11 (6.83) | -1.70 (281) | 63.00 (14.06) | 65.04 (15.56) | -1.34 (306) | 3.26 (.67) | 3.54 (.74) | -3.91*** (313) | 2.29 (.79) | 2.64 (.95) | -3.90*** (294) | 2.77 (.67) | 3.10 (.96) | -3.87*** (269) |

*Note.* UNI. = University. *$p < .05$. **$p < .01$. ***$p < .001$

## 9.3 Discussion

This study aimed to address the paucity of research evaluating stress interventions by surveying five members of senior university management to obtain objective measures of the HR stress-intervention strategies implemented at each of the five universities. The key purpose of the study was to investigate potential relationships between objective HR measures of intervention strategies at an organisational level and employee-level psychological strain and work attitudinal outcomes, in order to identify what types of organisational intervention strategies were effective in changing employee-levels of psychological strain and attitudes of job satisfaction, organisational commitment, trust in senior management, and procedural justice.

The results showed that employee levels of organisational commitment and/or trust in senior management were higher at four of the universities, and employee perceptions of procedural justice were higher at all of the universities. The study identified the specific measures that were taken to heighten employees' trust in senior management and procedural justice, as well as numerous strategies to enhance employee health and work attitudes by raising the awareness of stress, redesigning jobs, addressing tenure concerns, improving work-life balance, improving consultation and communication processes, enhancing interpersonal relationships, enhancing training and promotional opportunities, and improving remuneration and recognition practices. The results showed that senior management at all universities implemented strategies designed to: enhance training, career development and promotional opportunities for staff; improve remuneration and recognition practices; improve work-life balance for staff; and to enhance the fairness of organisational policies and procedures.

The positive employee-level outcomes include higher levels of perceptions of procedural justice at all universities, which suggests a trend as a high number of HR measures were aimed specifically at increasing procedural justice perceptions (see Table 7). The higher levels of employees' trust in senior management at Time 2 may also indicate a trend as the majority of the universities implemented measures to develop the leadership capabilities of staff, and address the training and mentoring of staff for leadership positions. It can be speculated that prominent HR measures such

as increasing employees' training and career development opportunities, and improving remuneration and recognition practices may be linked to higher levels of trust in senior management and affective organisational commitment for employees at the majority of the universities.

The study also contributes to the improved management of people at work by identifying university-specific HR initiatives: (1) leadership development and management skills programs to enhance the capacity of leaders, particularly Heads of Departments, to manage employees; (2) a university wide strategy for the early intervention and management of stress claims in order to increase an awareness of the resources available to staff (and supervisors) and to assist in the early identification and reporting of stress and stress situations; and (3) a university wide restructuring of academic portfolios to streamline systems and administration processes within the university. It is of note that employees in the universities that implemented leadership development programs heightened their levels of perceived procedural justice, commitment to the organisation, and trust in senior management. In addition, employees at the university that implemented a strategy for the early intervention and management of stress claims reported the lowest level of psychological strain among the universities in 2003. Furthermore, it appears that the university-wide restructuring at one university may have impacted negatively on employees' levels of strain and work attitudes at the time of the second AUSS survey. It would be of value for further research to examine the abovementioned relationships to determine the impact(s) of those specific intervention and restructuring strategies.

The present study, in particular, extends the first study in this thesis which showed that employee awareness of stress interventions (POS) was associated with favourable outcomes for both employees and the organisation in terms of reduced levels of strain, and increased levels of positive work-related attitudes as it confirms that stress-reduction measures were implemented by the universities and documents the actual strategies that were undertaken. The findings suggest that policies developed to promote just and fair organisational procedures, and heighten employees' trust in senior management specifically, may have been effective in heightening employees' perceptions of justice and trust which, in turn, improved the workplace environment for many employees in the participating universities. Hence,

it appears beneficial for senior management to develop and maintain a spirit of trust and a sense of procedural justice within their organisations.

In addition, the present study extended the preceding study that highlighted the importance of workplace factors in enhancing fair procedures to encourage reciprocity from university employees, as job satisfaction was a dominant and enduring predictor of procedural justice for all staff categories, and trust in senior management predicted justice for non-academic staff. Hence, HR initiatives aimed to enhance procedural justice in particular, may also promote other positive employee attitudes and result in improved university work environments.

The following chapter builds upon the results of the present study by examining qualitative evidence from employees at the five participating universities to determine the types of strategies that university staff perceived to be effective in reducing stress between 2000 and 2003. This examination may assist universities and other organisations to identify potential effective strategies to reduce stress and enhance morale within the work setting.

# Chapter 10:
# Study 5 – Employees' Perceptions of Effective Interventions at Five Universities

## 10.1 Overview

As stated in Chapter 1, occupational stress is a multi-faceted problem that has increased in recent decades (Cooper, 1998). Accordingly, the qualitative study in this chapter focuses on interventions to reduce occupational stress, as experienced by individuals at work. The present study extends the research in the preceding study and aims to build confidence in the validity of those findings by examining feedback from staff at the aforementioned five universities regarding any perceived changes to their level of stress, and their perceptions of the effective stress-reduction interventions implemented at their university between 2000 and 2003.

## 10.2 Introduction

The paucity of evaluative research on stress interventions and the methodological and conceptual difficulties inherent in stress-intervention research were discussed in Chapter 3. As a result, calls for more rigorous evaluation of interventions are not novel (see Giga, Noblet, et al., 2003). The present study answers a call to evaluate the effectiveness of stress interventions by examining employee perceptions of the types of strategies that were effective in reducing stress. The study draws from the emerging positive psychology movement and on an article by Luthans (2002, p. 695) on the need for and meaning of a positive approach to organisational behaviour, as the organisational behaviour field "needs a proactive, positive approach emphasizing strengths, rather than continuing in the downward spiral of negativity trying to fix weaknesses".

## 10.3 The University Context

Details of the contemporary challenges facing the university sector in Australia, and the findings of the AUSS were discussed in Chapter 4. Briefly, the 2000 survey of 8732 staff at 17 universities confirmed very high levels of psychological distress and perceptions of excessive workloads, and academic staff in particular, reported dissatisfaction with, and distrust of university management, which, together with perceived unfairness in university appointment, promotion and redundancy procedures, led to low levels of organisational commitment (Winefield et al., 2002; Winefield et al., 2003). On the basis of the findings, Winefield et al. (2002) proposed that universities implement multi-level interventions to improve health and morale in their institution. The recommendations included increasing staff awareness of EAPs; reviewing the fairness of promotion, redundancy and performance appraisal procedures; reviewing teaching and research demands, and the adequacy of pay, promotion and recognition systems; developing leadership capabilities; developing communication processes and systems to reduce and/or help staff to cope with job insecurity; and implementing strategies to increase financial and staffing resources. A follow-up Time 2 survey of 6301 staff at 13 of the original 17 universities showed that despite increases in psychological strain, there were important improvements in key work attitudes (e.g., increased trust in senior management, commitment to the organisation, perceptions of procedural justice).

Study 4 of this thesis showed that five of the 13 universities implemented various multi-level intervention strategies to enhance employee well-being and work attitudes by raising the awareness of stress, redesigning jobs, addressing tenure concerns, improving work-life balance, improving consultation and communication processes, enhancing interpersonal relationships, enhancing training and promotional opportunities, and improving remuneration and recognition practices. The present study examines feedback from employees at those five universities regarding any perceived changes to their level of stress, and their perceptions of the effective stress-reduction interventions implemented at their university between 2000 and 2003. The key purpose of this study is to examine employee perceptions of effective intervention measures in order to determine whether there is a relationship between employees' perceptions of effective stress-reduction strategies and the HR stress-reduction interventions that were documented in Study 4.

As in Study 4, the present study will classify the perceived stress-reduction strategies as being directed towards the individual, the organisation, or the individual/organisation interface in accordance with the DeFrank and Cooper (1987) classification of occupational stress management programs. This approach will enable a comparison of the strategies reported by HR management and employees.

The present study acknowledges the need for research to be theory driven and the JD-R model is a framework that is relevant for use in examining the complex mechanisms linking job demands and job resources at work, and that job resources specifically may buffer the relationship between job demands and stress reactions.

## 10.4 The JD-R Theoretical Model

As discussed in Chapter 2, the theoretical framework of the dual-factor JD-R model explains and describes how the key psychosocial factors of job demands and job resources and their combinations predict morale and distress on the one hand and motivation and performance on the other (Bakker & Demerouti, 2007; Bakker et al., 2005; Bakker, Demerouti, & Schaufeli, 2003; Demerouti et al., 2001). Job demands are the physical, psychological, social, or organisational aspects of the job that demand sustained effort or skills, and may become stressors when meeting them requires considerable effort (the health impairment process; Bakker & Demerouti, 2007). On the other hand, job resources are the physical, psychological, social, or organisational aspects of the job that may reduce job demands and aid in achieving work goals, or stimulate personal growth, learning and development (the motivation process; Bakker & Demerouti, 2007; Demerouti et al., 2001; Schaufeli & Bakker, 2004).

A body of research has shown that job resources may buffer the relationship between job demands and stress reactions as employees who have high levels of resources available are more capable of dealing with demanding work conditions and consequently experience lower levels of exhaustion (see Bakker et al., 2005; Bakker, Demerouti, Taris et al., 2003). Research has identified the key types of job resources as: autonomy, social support, management supervision, performance feedback, and opportunities for professional development (Bakker & Demerouti, 2007).

Job resources are diverse and are located at multi-levels (i.e., organisational, interpersonal, work organisational, task) and include pay, career opportunities and job security located at the organisational level; co-worker support and team climate located at the interpersonal and social relations level; role clarity and participation in decision making located at the work organisation level; and skill variety and performance feedback located at the task level (Bakker & Demerouti, 2007). As work environments that offer many resources can foster morale, the stress interventions that employees perceive to have been implemented at their universities will reflect the resource component within the JD-R model.

## 10.5 Study Aims and Research Questions

As outlined in Chapter 2, this study applies the motivational pathway of the JD-R model to propose that job resources such as stress management or reduction interventions may play extrinsic motivational roles in helping to achieve work goals and reduce job demands (i.e., better working conditions, increased job security, increased opportunities for promotion, improved management supervision, increased performance feedback). Interventions may also play intrinsic motivational roles in assisting to achieve work goals and reduce job demands (i.e., greater autonomy, enhanced training and development programs, increased skill variety, greater role clarity). Indeed, employees who have high levels of resources available to them are more capable of dealing with demanding work conditions (Bakker, Demerouti, Taris et al., 2003). As a result, in view of the intervention strategies implemented at the universities between the two time-points of the AUSS, this study employs the JD-R theoretical framework in order to explore employee-level reports of stress-reduction interventions to investigate the following research questions:

*Research Question 1:* What types of intervention strategies did employees at five universities perceive to be effective in reducing stress?

*Research Question 2:* What is the relationship between employees' perceptions of effective stress-reduction strategies and the HR intervention strategies that were implemented by management (and documented in Study 4)?

## 10.6 Method

### *10.6.1 Participants and Procedure*

The Time 2 sample of 2548 participants from the five universities comprised 912 males (36%) and 1452 females (57%), and 184 participants who did not disclose their gender. The sample comprised 1059 academic staff (41%) and 1323 non-academic staff (52%), 166 participants did not disclose their staff group. The mean age was 42.3 years, (*SD* = 11.27). Participation in the Time 2 survey was anonymous. The following table provides demographic details of the total participant pool at each of the five universities.

**Table 10.1** *Demographic Details of the Participants from each University*

| | **Age** | | **Gender** | | | **Staff Group** | | |
|---|---|---|---|---|---|---|---|---|
| **University** | *N* | *Mean* | Male | Female | Not disclosed | Academic | Non-Academic | Not disclosed |
| A | 594 | 43.3 | 216 | 333 | 45 | 208 | 344 | 42 |
| B | 977 | 42.0 | 358 | 528 | 91 | 312 | 583 | 82 |
| C | 401 | 41.9 | 122 | 249 | 30 | 94 | 279 | 28 |
| D | 366 | 41.4 | 154 | 208 | 4 | 366 | – | – |
| E | 210 | 43.3 | 62 | 134 | 14 | 79 | 117 | 14 |
| Total | 2548 | 42.3 | 912 | 1452 | 184 | 1059 | 1323 | 166 |

As part of the second-wave of the AUSS, questionnaires were distributed and accessed electronically in 2003 at each university campus (see Winefield et al., 2003). To ensure maximum participation and preserve confidentiality, the survey was conducted anonymously.

### *10.6.2 Measures*

The Time 2 AUSS questionnaire included an evaluation component to measure the strategies that were implemented after the Time 1 survey.

***Perceptions of Stress-Reduction Measures.*** To assess employees' perceptions of stress-reduction measures, they were asked: "Has the overall level of stress you experience at work changed during the last three years?" The five response options ranged from (*Yes, Decreased a lot*) to (*Yes, Increased a lot*). If staff answered yes, they were asked to briefly describe the major causes of the change in their level of stress. This open-ended question allowed sufficient space for multiple responses.

### *10.6.3 Analysis*

The analysis was conducted by the author and a second, independent, rater. Specifically, we looked for work-related or personal conditions that the respondents described as enabling their perception of reduced stress at work. We proceeded to search for patterns and themes using thematic analysis. Thematic analysis is a process where the data is organised according to patterns in the information (Boyatzis, 1998). The themes were generated based on the theory of the JD-R model: reduced job demands, increased or better use of job resources, and mobilisation of personal resources. A coding grid was created to separate the data according to the themes during the analysis stages. The data were coded in several stages. At the first stage, the survey responses were read and the responses were categorised as representing the meta-themes of: (1) reduced job demands, (2) increased job resources, (3) personal resources, (4) factors intrinsic to the employee's job, (5) role in the organisation, (6) relationships at work, (7) reward and recognition, (8) organisational structure and climate, and (9) extra-organisational resources. Verbatim quotes where participants explained their experience were noted. A list of the key stress-reduction strategies perceived by all respondents was compiled. During this stage, it was noted that 23 participants reported that they had changed employers or universities during the three-year period and as a result, their responses were excluded from further analyses.

At the second step, a coding guide was created defining each category within each meta-theme. Sub-themes were identified and after combining closely related categories, 12 discrete categories were recognised: reduced job demands; increased job resources (i.e., strategies that would assist in achieving work goals and/or reduce

job demands); and employees' personal resources. Personal resources refer to aspects of the individuals' ability to control and adapt to their work environment (i.e., self-efficacy, optimism: Hobfoll, Johnson, Ennis, & Jackson, 2003).

The categories of reduced job demands were: (1) changes in job or work role; and (2) reduced working hours and/or status. The increased job resources were: (3) specific organisational strategies; (4) increased staff or resources and/or systems; (5) new Head of Department, supervisor or management; (6) improved colleague relationships and/or support; (7) increased success, recognition or promotion; (8) greater role clarity; (9) increased job security; (10) improved physical and/or work environment characteristics; and (11) improved communication processes. The personal resources category (12), referred to increases in employees' positive or protective coping strategies or attributes. The category of "other" consisted of responses that could not be assigned to the abovementioned 12 categories. At the third stage, an independent coder analysed 10% of the transcripts to ensure inter-rater reliability of the analysis. Any discrepancies in coding were discussed until an agreement was reached by all coders.

Table 10.5 provides examples of the coding for each type of response. The manifestations of resources were described for each case in terms of individual, organisational and individual-organisation interface strategies.

## 10.7 Results and Discussion

In the sample of 2548 participants from the five universities, descriptive statistics showed that 1803 employees responded to the survey question "Have your stress levels changed during the last 3 years?" Of the 1803 academic and non-academic staff, 204 participants (11%) reported that their level of stress had decreased, 465 reported no change (26%), and 1134 (63%) reported that their level of stress had increased. The present study examines responses from the 204 participants who reported that their level of stress had decreased and provided reasons for the decrease during the three year period. The following table provides demographic details of those 204 respondents.

**Table 10.2** *Demographic Details of Employees' With Reports of Decreases in Stress (n = 204)*

| University | *N* | Gender | | Staff Group | |
|---|---|---|---|---|---|
| | | Male | Female | Academic | Non-Academic |
| A | 48 | 15 | 33 | 14 | 34 |
| B | 51 | 17 | 34 | 8 | 43 |
| C | 52 | 16 | 36 | 4 | 48 |
| D | 32 | 15 | 17 | 32 | – |
| E | 21 | 6 | 15 | 6 | 15 |
| Total | 204 | 69 | 135 | 64 | 140 |

The following table summarises the perceived causes of decreases in stress for employees at each of the universities. Responses from 23 participants who had changed employers or universities during the three-year period were excluded from the thematic analysis. In total, 181 respondents reported reasons for reduced stress and a total of 272 statements emerged that described a variety of reasons for reduced stress.

**Table 10.3** *Summary and Frequency of Themes for each University*

| | University | | | | |
|---|---|---|---|---|---|
| | **A** | **B** | **C** | **D** | **E** |
| **Perceived Strategies** | *n* = 43 | *n* = 46 | *n* = 48 | *n* = 25 | *n* = 19 |
| Changes in job or work role | 14 | 17 | 19 | 9 | 2 |
| Specific intervention strategies | 11 | 8 | 3 | 4 | 8 |
| Increased staff or resources or systems | 7 | 4 | 10 | 5 | 2 |
| Increased personal resources | 10 | 5 | 10 | 2 | 2 |
| (Positive coping strategies) | (5) | (4) | (9) | (2) | (2) |
| (Protective coping strategies) | (5) | (1) | (1) | (0) | (0) |
| New Head of Department / Supervisor/ Management | 4 | 7 | 9 | 3 | 3 |
| Improved colleague relationships / support | 8 | 7 | 5 | 3 | 2 |
| Increased success/ recognition/ promotion | 3 | 3 | 4 | 6 | 4 |
| Reduced working hours or change in employment status | 4 | 3 | 2 | 2 | 1 |
| Greater role clarity | 2 | 4 | 2 | 1 | – |
| Greater job security | 1 | 2 | 2 | 2 | 2 |
| Improved physical and work environmental characteristics | 1 | 5 | 1 | 1 | – |
| Improved communication processes | 1 | – | – | – | 1 |
| Other | 4 | 3 | 1 | 1 | – |
| Total | 70 | 68 | 68 | 39 | 27 |

The following table summarises the perceived causes of decreases in stress from the 181 participants who reported that their level of stress had decreased after the Time 1 survey, and those who remained at the same university during both waves of the AUSS survey. Table 10.4 also states the target level for each perceived strategy where applicable, i.e., individual, organisational, or individual /organisation interface.

**Table 10.4** *Summary and Targets of Strategies, and Frequency of Themes*

| **Perceived Strategies** | **Number of times mentioned (*N* = 181)** | **Percentage from total statements** |
|---|---|---|
| Changes in job or work role<br>***Personal Decision or Organisational Level*** | 61 | 22 |
| Specific intervention strategies<br>***Organisation Level*** | 34 | 13 |
| Increased personal resources<br>(Positive coping strategies)<br>(Protective coping strategies)<br>***Personal Decision/Attribute or Individual Level*** | 29<br>(22)<br>(7) | 11<br>(8)<br>(3) |
| Increased staff or resources/ systems<br>***Organisation Level*** | 28 | 10 |
| New Head of Department / Supervisor/ Management<br>***Individual /Organisation Interface Level*** | 26 | 10 |
| Improved colleague relationships /support<br>***Individual /Organisation Interface Level*** | 26 | 10 |
| Increased success/ recognition/ promotion<br>***Individual /Organisation Interface Level*** | 20 | 7 |
| Reduced working hours or change in employment status<br>***Personal Decision*** | 12 | 4 |
| Greater role clarity<br>***Individual / Organisation Interface Level*** | 9 | 3 |
| Increased job security<br>***Organisation Level*** | 9 | 3 |
| Improved physical and work environmental characteristics<br>***Organisation Level*** | 8 | 3 |
| Improved communication processes<br>***Organisation Level*** | 2 | < 1 |
| Other | 9 | 3 |
| Total | 272 | Approx. 100 |

For the respondents who reported that their level of stress had decreased, the qualitative statements indicated dominant themes of: changes in job or work role (61 statements); the use of specific stress-reduction and/or management intervention strategies (34 statements); increased personal resources (29 statements); and increasing staff and/or resources or systems (28 statements). Table 10.4 also shows that employees perceived that a combination of individual, organisational, and individual/organisation interface level strategies were related to a reduction in their levels of stress.

The coding for each type of response is shown in Table 10.5.

**Table 10.5** *Examples of the Different Themes as they Appear in the Data*

| Theme | Example |
|---|---|
| Changes in job or work role | 'Duties have changed. Now not as pressured'<br>'Change of job from two part time positions to one full time position'<br>'Completion of major project' |
| Specific intervention strategies | 'Work life balance strategies - have allowed me to work 48/52 and take more holidays to spend with my kids'<br>'Stress management information sessions, relaxation sessions' |
| Increasing staff / resources | 'Improved work flow processes and implemented systems that were more efficient. Many of these did not even exist when I first began working in the position'<br>'Two new staff members were employed ten months ago to undertake some of the work which used to be done by myself and two others who have the same position in separate schools in the faculty' |
| Increased personal resources<br>• Positive coping | 'More awareness. I also counsel people who are stressed in the Uni, so I feel that I also need to role model and "practice what I preach"'<br>'Learnt not to take it personally when I miss out on a competitive research grant' |
| • Protective coping | 'Don't care anymore'<br>'I work less and go home regardless' |
| New Head of Department /Supervisor/ Management | 'My boss and his boss are better than previous bosses'<br>'The Division Head was replaced with a much more capable and open person who is working with me to reestablish a meaningful role for myself in the Division'<br>'Currently working for a fabulous immediate superior who makes coming to work a pleasure' |
| Improved colleague relationships/ support | 'Working in a new department where my colleagues are just fantastic! They're like family to me'<br>'New workmates who offer companionship and mutual support and ideas' |
| Increased success/ recognition/ promotion | 'From working part-time I am now working full-time and I feel like I have "proved" myself to my co-workers'<br>'...now trusted with more responsible and complex projects and presented with more opportunities to express my own opinion, which brings its own stress but is also more rewarding' |
| Reduced work hours or changing status | 'Changed employment status from full-time to part-time'<br>'To reduce personal stress, I decided to change jobs and look for a 0.8 position instead of full time. I was lucky enough to get a suitable position within the university almost straight away' |
| Greater role clarity | 'My increased experience of my role'<br>'Becoming accustomed to the workplace' |
| Increased job security | 'I have a longer term fellowship now than I did a year ago, and project grant funding for my staff that is more stable. This has given me job security, more confidence, and more flexibility with my work'<br>'More permanance in my position now' |
| Improved physical and environmental characteristics | 'Change of environment to a much more pleasant office and more convenient location'<br>'New physical location offering excellent working environment' |
| Improved communication processes | 'Greater communication by university administration as a result of staff discontent regarding budget decisions and the university's direction for the future'<br>'Well informed of plans involing (sic) my area' |

### *10.7.1 Changed Job or Work Role (22%)*

Based on the qualitative data analysis, a change in job or work role was the most frequent reason for experiencing reduced stress at work as it was reported by 22% of the respondents. Thus, for example, two employees from one university

reported that they were no longer a Head of Department, whilst another: '*went from teaching/research position to research only position*'.

It is likely that employees' may have made a personal decision to change their work role, and felt a lower level of stress as a result. However, it can be speculated that for some employees, a change in job or work role may be associated with job redesign strategies as employees reported that their duties or jobs had changed and they felt less pressured as a result.

Other employees reported a decreased level of stress due to a: '*busier work role*, and the completion of major projects, for example: '*Major projects to correct system and audit issues are completed'*. In addition, there were reports that employees were better able to utilise their learned skills due to a change of work role and as a result, reduced their level of stress, whereas another respondent reported less stress after being: *'Relocated away from major disastrous project that wasn't going anywhere - was frustrating, waste of my time, poorly managed'*.

### *10.7.2 Specific Intervention Strategies (13%)*

Specific organisation-level intervention strategies were reported by 13% of the respondents. Most statements described specific stategies that included organisational changes and restructuring departments or schools, for example: '*More effective and efficient management and infrastructure support'*. Greater access to flexible work practices such as flexitime and working from home policies, and family friendly policies were reported: '*Work life balance strategies - have allowed me to work 48/52 and take more holidays to spend with my kids'*. Notably, one employee from University C, which implemented the early intervention and management of stress claims as a priority intervention strategy (see Chapter 9: Table 2) reported decreased stress due to: '*better handling of claims'*.

Moreover, employees reported greater management awareness of excessive working hours and as a result there was a focus on management strategies to redesign, reduce and redistribute workloads, change or reduce working hours, and reduce overtime hours:

'*Work has been designed to be more managable*'.

'*Individual load has decreased, used to work up to 100 hours a week, 35 hour shift's'.*

'*Counselled to more often work only 7 hours 35 min as required. I often work up to an extra hour each day, several times per week, because I know things need to be done by certain deadlines'.*

'*Management have noted the excessive overtime (mostly unpaid - time off in lieu)'.*

Other intervention strategies were targeted at the individual-organisation interface level, as they aimed to increase interpersonal and social relations by increasing the number of opportunities for employees to socialise: '*Many extra-curricular activities e.g. social events, inter-departmental sports events and outings'.*

Statements also described strategies that were directed at the individual-level:

'*Advice on ergonomics of my workstation'.*

'*...guidance from Staff and Student Services'.*

*'Provision of nutrition and relaxation and massage sessions'.*

Other individual directed strategies included stress management training and university stress reduction courses, yoga classes, and university subsidised massage treatments: *'The University paid for all staff to receive free massages, this occurred twice and was an amazing experience'.*

Indeed, the provision, promotion, and access to employees of the abovementioned supportive management HR interventions is consistent with research by Teo and Waters (2002) who found that a supportive organisational environment in which numerous employee friendly HR policies were present has a direct, negative effect on interpersonal strain and plays a role in reducing occupational strain.

### *10.7.3 Increased Personal Resources (11%)*

Employees' responses were coded as relating to this theme when they described utilising or developing their own resources, learning new skills or changing their attitudes. This theme was reported by 11% of respondents. The category was recoded further into the two categories of positive and protective coping decisions or attitudes. Positive coping decisions were reported by 8% of employees and included increases in self-efficacy, experience, maturity, and improvements in their personal outlook which suggests that individuals were able to strengthen and enhance their

own resources. Indeed, research by Xanthopoulou, Bakker, Demerouti, and Schaufeli (2007) notes that personal resources such as self-efficacy and optimism help employees cope with stress, and Cunningham, De La Rosa, and Jex (2008) propose that self-efficacy may protect well-being as it may lead employees to create more positive cognitive and emotional appraisals of occupational stressors.

Several employees reported that they needed to manage and address their own stress levels better in order to model the appropriate behaviour to others:

> '*More awareness. I also counsel people who are stressed in the Uni, so I feel that I also need to role model and "practice what I preach'.*

> *'Learnt how to manage stress better'.*

Another employee reported that spending more time with their family reduced their level of stress: '*Taking more time to do family duties has relieved a lot of stress over the past year and a half*'.

However, 3% of respondents reported making protective coping decisions. For example, '*I have cut what I expect of myself',* or making decisions to care less about their work, prospects for promotion, research and career goals in order to decrease their level of stress, e.g.,

> '*...work less and go home regardless'.*

> *'I've stopped voluntarily doing more than I'm paid to do. I don't put in as many extra unpaid hours, and have found nobody has noticed'.*

As coping is a complex process that is difficult to measure (Burke, 1997), it can only be speculated that those employees may have become disengaged or detached as a protective coping strategy in order to protect their resources (Hobfoll, 1989). With regard to the JD-R model, perhaps those protective coping decisions are related to the de-energising hypothesis which predicts that as a result of increased job demands over a prolonged period of time, an individual's performance will be reduced as their capacity and energy to meet those perceived demands will become depleted (see Demerouti et al., 2000; Schaufeli & Bakker, 2004).

### *10.7.4 Increased Staff or Resources / Systems (10%)*

In terms of increases in staffing and resource levels reported by 10% of respondents, the majority of the statements referred to additional staff being employed

to share the work, particularly for employees who had felt overwhelmed by their workload:

> *'Two new staff members were employed ten months ago to undertake some of the work which used to be done by myself and two others who have the same position in separate schools in the faculty.'*

Additional staff were employed in response to the identification of problem areas by management: '*Problem areas have been identified and more staff have been employed to get the job done correctly and efficiently'*. Statements also referred to improvements in employee recruitment and selection processes: '*Recruitment of more top level staff', 'appointment of quality admin staff'*.

In addition, some positions were filled after lengthy delays: '*Assisting position to me was finally filled after 12 months'*. Employees also reported that there was an increase in training for staff, additional support staff had been employed, and there was an increase in teaching support such as demonstrators for practicals.

There were also reductions in stress levels due to the implementation of computer systems: '*Less student contact because of Peoplesoft [software program]'* and the implementation of new work systems to improve productivity: '*Improved work flow processes and implemented systems that were more efficient. Many of these did not even exist when I first began working in the position'*.

### *10.7.5 Improved Relationships at Work*

***New Department Head or Supervisor or Management and/or Increased Support (10%).*** A change in supervisor or Head of Department, and other managerial changes were a source of reduced stress for 10% of respondents, for example:

> '*I recently changed work and my new work environment is much, much less stressful than the previous one mostly thanks to my direct supervisor and co-workers'*.

Several employees reported that they disliked previous management structures or had poor relationships and/or conflict with their previous managers:

> *'New Management, new operating procedures, removal of the incredibly bad original management structure'*.
>
> '*A restructure in 1998-9 was catastrophic, with all managers appointed at that time now departed or moved. We have just appointed a new manager who*

*seems fine so far. I have had nothing but contempt for our managers for three years, so this is a big improvement'.*

As there is a degree of perceived organisational support in an employee's relationship with their supervisor, there is evidence that interpersonal conflict between employee's and their supervisor is detrimental, as the perception of a less supportive work environment lowers job satisfaction and organisational commitment, and increases turnover intention (Rhoades & Eisenberger, 2002).

In addition to a reduction in employees' conflict with management, several statements referred to positive, supportive and encouraging relationships between employees and their supervisors or managers:

*'Strong relationship of respect with boss'.*

*'Currently working for a fabulous immediate superior who makes coming to work a pleasure'.*

*'...given empowerment by new supervisor'.*

'*The Division Head was replaced with a much more capable and open person who is working with me to reestablish a meaningful role for myself in the Division'.*

This is consistent with research by Sargent and Terry (1998) who examined the moderating effect of social support in 135 full-time administrative university employees. They found that high levels of social support from supervisors buffered the adverse effects of high strain jobs on levels of job satisfaction and depersonalisation. Indeed, one employee reported that their manager was instrumental in reducing stress within the department: *'Mainly due to our head of department who was very careful about workload allocations. It was her specific and explicit intention to reduce and control staff workloads.'*

***Improved Colleague Relationships or Support (10%).*** Colleague relationships or support was an important resource for 10% of the respondents. Colleagues provided emotional support as a type of stress relief as employees reported that supportive co-workers motivated and stimulated them: '*new workmates who offer companionship and mutual support and ideas'.*

Employees also highlighted teamwork and team spirit as being of key importance in reducing stress:

'*Workload is shared more evenly among staff members'.*

*'Existing staff in my area work extremely well together and help each other - team work and harmony is very important to all of us'.*
*'Spending out of work time with co-workers'.*

Moreover, supportive strategies such as team teaching to share the teaching load, and cross training skills schemes were reported:

'*We have implemented a cross training scheme where we all share skills and teach each other so that during peak periods we can share work. As we work in slightly different areas our timelines aren't all alinged so we can often call on others to assist'.*

Prior research shows that social support provides a stress-buffering effect on an individual's health and well-being (Cohen & Wills, 1985). The positive benefits of soical support for the organisation in terms of effective teamwork and staff retention was also highlighted: '*Existing staff in my area are now tending to stay, rather than leave...'.* Statements also referred to the benefits of working in a more easy-going and less formal atmosphere in new work areas or departments:

'*...new staff are much more friendly, helpful and welcoming'.*

'*Working in a new department where my colleagues are just fantastic! They're like family to me'.*

Employees reported a reduction in stress as a result of reduced co-worker conflict: '*nastier staff have now left'.* This finding is in line with research by de Dreu, van Dierendonck, and de Best-Waldhober (2002) who found that interpersonal conflict was related to lower levels of employee well-being and work-related attitudes.

### *10.7.6 Increased Success or Recognition or Promotion (7%)*

Statements referring to success, recognition or promotion as a perceived cause of reduced stress were reported by 7% of respondents. Indeed, several employees reported that promotions and a higher level of salary had led to a reduction in stress. Whilst rewards such as salary are tangible rewards, other intangible rewards such as appreciation from a supervisor, manager or colleagues are also important to employees as several statements referred to feeling recognised and feeling an increased sense of achievement:

'*...given more responsibility and acknowledged for work effort'.*

*'..now trusted with more responsible and complex projects and presented with more opportunities to express my own opinion, which brings its own stress but is also more rewarding'.*

Moreover, employees reported that dynamic responsibilities, non-monetary incentives, and an increased feeling of belonging made them feel valued and recognised:

'*Have received non-monetary incentive in the form of work paying for my current (part time) course fees. Has given me the message that I am valued as a staff member, and my career is worth developing'.*

An employee's statement referred to feeling that they had proved themselves to their co-workers by increasing their working hours from part-time to full-time. Similarly, another employee felt that their ideas had been recognised and accepted: '*Radical projects I have initiated are now accepted as mainstream - reducing stress and feeling of risk taking'.* Another employee had received recognition from their manager which led to more training and development opportunities:

'*Manager willing to give opportunities to learn and develop - been on courses seminars workshops and training to develop skills. Given opportunities to do project work and work of a higher level'.*

The abovementioned statements relating to recognition and positive feedback are in line with research by Elovainio and Kivimäki (2001) who found that employees need structure to their work environment and feedback provides a source of informational support that can assist them to function effectively at work. Without structure, control and feedback, they experience role ambiguity as they do not know what is expected from them, and research has shown that role ambiguity is associated with occupational strain (Cooper & Marshall, 1978; Elovainio &, Kivimäki, 2001).

### *10.7.7 Reduced Work Hours or Employment Status (4%)*

Approximately 4% of respondents stated that they had made decisions to reduce their job demands by reducing their working hours or changing their employment status from full-time to part-time in order to reduce their level of stress:

*'To reduce personal stress, I decided to change jobs and look for a 0.8 position instead of full time. I was lucky enough to get a suitable position within the university almost straight away'.*

Other employees stated that they had changed to a lower level job to reduce their stress: '*I opted to take a secondment to a lower HEW job for 6-12 months to ease the pressures on myself"* and one employee left their '*... full time senior lectureship to become casual'*.

### *10.7.8 Greater Role Clarity (3%)*

The theme of greater role clarity reported by 3% of respondents included items such as greater confidence and experience in their own abilities to undertake their work role. Statements from employees referred to becoming more accustomed to the workplace and feeling more familiar with the job and related tasks: '*...more confident in what I'm doing';* and *'... increased experience of my role'*.

In terms of the motivational pathway of the JD-R model discussed in Chapter 2, increasing the clarity of an employee's work role may play intrinsic motivational roles in assisting them to achieve work goals and reduce the demands of their job. Indeed, in regards to job and task characteristics, a meta-analytic review by Örtqvist and Wincent (2006) showed that the role stressors of role ambiguity, conflict and overload were related to work stress outcomes including increased tension, burnout and turnover intentions, and lower levels of job satisfaction and organisational commitment. Given that prior research (Cooper & Marshall, 1978; Elovainio & Kivimäki, 2001) found that role ambiguity was associated with occupational strain, it is not surprising that employees reported greater role clarity as a source of reduced stress at work.

### *10.7.9 Increased Job Security (3%)*

Almost 3% of respondents associated greater job security with reduced stress. Indeed, research by Mikkelsen and Gundersen (2003) found that work characteristics including job insecurity, and a lack of development opportunities are indicative of low control and may cause a lasting stress response. Moreover, in the AUSS Winefield et al. (2002) found that in response to downsizing practices within universities, academic staff in particular, were highly stressed due to increased teaching demands and student/staff ratios, and the decreased autonomy inherent in funding pressures and job insecurity.

Statements from employees regarding increased job security referred to being awarded tenure and having a secure or permanent position:

'*Current position seems quite stable, with some prospect for advancement'.*

'*Changed from Casual Temporary to Part-time Permanent position'.*

*'Current department is taking over others rather than being in danger of being taken over'.*

Furthermore, an employee referred to the consequences of increased job security for them in terms of gaining confidence and flexibility:

'*I have a longer term fellowship now than I did a year ago, and project grant funding for my staff that is more stable. This has given me job security, more confidence, and more flexibility with my work'.*

### *10.7.10 Improved Physical or Work Environment Characteristics (3%)*

Almost 3% of respondents stated that changes in the characteristics of their physical or work environment resulted in a positive change in stress levels. Statements from employees referred to:

'*...more relaxed working environment. I work at a smaller campus'.*

*'Slight slower pace in work environment due to culture and nature of organisation'.*

Other statements referred to changes in the physical location of their workplace and the ensuing positive benefits that the location provided:

'*New physical location offering excellent working environment';*

*'Change of environment to a much more pleasant office and more convenient location'.*

In addition, a statement referred to the benefits of the physical design of their office space as it allowed employees to interact effectively with their team: '*more suitable office space provided - allows work group to come together'.*

### *10.7.11 Improved Communication Processes (< 1%)*

The final category of improved communication processes was reported by two respondents. The statements referred specifically to improvements by management in sharing information:

'*Well informed of plans involving my area'.*

*'Greater communication by university administration as a result of staff discontent regarding budget decisions and the university's direction for the future'.*

In line with the stressor-strain perspective of the work stress literature, the strategies that employees associated with decreases in their level of stress appear to address the two broad types of work stressors: job or task characteristics, and support and social conditions (Kompier, 2003). Thus, for example, changes in job or work role, increased staffing resources or new systems, greater role clarity, reduced work hours or employment status, greater job security, and improved physical or work environment characteristics may be associated with the characteristics of the job or task. Secondly, interpersonal relationships between employees and their supervisor or manager, and between employees and their colleagues, employees' success or recognition, and improved communication processes may be associated within the broad stressor of support and social conditions. The specific intervention strategies that were stated to reduce employees' levels of stress aimed to address aspects of either of the two categories of stressors. However, the final category of increased personal resources refers to individual coping strategies and the role of psychological factors in the work stress process as individuals were able to activate and increase their personal resources in order to cope with stress (Xanthopoulou et al., 2007).

Employees' increased personal resources, specifically positive coping strategies, may reflect the intrinsic motivational role within the motivational pathway of the JD-R model (Bakker & Demerouti, 2007; Demerouti et al., 2001) that was outlined in Chapter 2. Within this pathway the intrinsic role of personal resources may lead to positive employee outcomes including a reduction of stress, personal growth and learning, a sense of belongingness, and a sense of achievement and competence (Schaufeli & Bakker, 2004). However, protective coping strategies may be related to the JD-R model's de-energising hypothesis in that increased job demands over a long period of time, reduce an individual's performance, as their capacity and energy to meet those perceived demands becomes depleted (see Demerouti et al., 2000; Schaufeli & Bakker, 2004). As a result, this may lead to a spiralling negative loss of resources (Hobfoll, 1989).

By applying the JD-R theoretical model of occupational stress to the perceived stress-reduction strategies, the results suggest that changes in an employee's job role

or a reduction in working hours or employment status reflect reduced job demands. In terms of job resources: organisational stress-intervention strategies; increased staffing and resources; improved interpersonal relationships; increased employee reward and recognition; greater role clarity; increased job security; improved communication processes; and improved physical and work environments may all be considered as additional resources that may act as a buffer to ongoing job demands and help employees to achieve their work goals, reduce job demands, and may result in reduced strain and positive employee well-being.

## 10.8 Summary and Conclusion

The research reported in this study adopted a qualitative approach to examine the specific factors that staff at five universities perceived to contribute to decreases in occupational stress between two time-points. The key purpose of the study was to identify *what* types of strategies were perceived to be effective in reducing employees' levels of stress. A second aim was to determine whether there was a relationship between employees' perceptions of those intervention measures and the HR management intervention strategies that were documented in Study 4.

The thematic analysis of the data provided a rich and comprehensive account of the types of strategies that reduced occupational stress for university employees at a micro level. This analysis was interpreted according to the JD-R theoretical model of occupational stress (Bakker & Demerouti, 2007; Demerouti et al., 2001) as the stress reduction strategies were viewed in terms of reduced job demands, job resources, and personal resources. Twelve discrete categories were identified through a thematic analysis of the self-report data: changes in job or work role; specific organisational intervention strategies; the personal resources of positive or protective coping strategies; increasing staff or resources and/or systems; new Head of Department or supervisor or management; improved colleague relationships and/or support, increased success, recognition or promotion; reduced working hours and/or status; greater role clarity; increased job security; improved physical and environmental characteristics; and improved communication processes.

It is notable, that employees perceived that a combination of individual, organisational, and individual/organisation interface level strategies were related to a reduction in their levels of stress. This result is consistent with the intervention

literature discussed in Chapter 3, as Giga, Noblet, et al. (2003) state that a combination of multi-level strategies are likely to be most effective in reducing stress as they address the organisational environment, the individual, and the individual-organisation interface.

The data highlight the diversity and multi-faceted nature of stress by the descriptions of the various stress-reduction strategies accessed or employed by university staff. The JD-R model of stress, in particular, provided a conceptual basis from which to explore the potential of additional or increased organisational resources to reduce job demands and stressors in work environments. Excluding statements from employees that referred directly to the use of personal resources and those that were categorised as 'other', 234 statements referred to positive changes in the employee's psychosocial work environment. The dominant theme that emerged from the data was that a change in job or work role was perceived to reduce stress. It is noteworthy that Study 4 showed that the majority of the universities implemented a variety of strategies to enhance job design and reduce work pressure. For example, the universities that were able to provide responses regarding job redesign strategies, implemented targeted strategies including regular reviews of job descriptions, implementing or reviewing job redesign and classification policies, and prioritising job responsibilities. Indeed, as a total of 23 specific job design interventions were implemented across the universities, it can be speculated that those strategies may be associated with some changes in employees' work roles.

Other dominant themes were the use of specific HR stress-reduction and/or management intervention strategies (34 statements); increased personal resources and coping strategies (29 statements); increased staff and/or resources or systems (28 statements); new Head of Department, supervisor or management (26 statements); and colleague relationships and support (26 statements). Indeed, by aggregating the latter two categories of relationships between employees and their supervisors, department heads or management; and between employees and their colleagues, the findings suggest that improved interpersonal relationships and support at work were reported most frequently by employees as a source of reduced stress. It is notable that Study 4 shows that across the five universities 13 intervention strategies were targeted specifically at improving interpersonal relationships. For example, policies including workplace bullying and violence, discrimination and harassment, equal opportunity,

conflict identification, and mediation and conflict resolution were implemented or reviewed by senior HR management. In addition, staff social activities were addressed by management at one university. These relationship building strategies, together with the demonstrated focus on leadership development and management skills, particularly for Heads of Departments, shown by three universities in Study 4, may have played a role in employees' perceptions of reduced stress.

Indeed, the importance of social support is shown by the Job-Demand-Control-Support (DCS) model (Johnson & Hall, 1988) of work stress discussed in Chapter 2. Briefly, the model proposes that the interaction of job demands, job control (job decision latitude) and workplace social support predicts employee health and well-being. The premise of the model is that the social support of colleagues and superiors may modify the association between job strain and the emergence of health problems by acting as an antidote or protective factor (Johnson & Hall, 1988). Social support includes instrumental support (i.e., additional resources or assistance in performing your work) and emotional support or socio-psychological esteem, on the one hand, and a low level of hostility and conflict, on the other. Indeed, this premise has been supported by studies on cardiovascular disease (Fuhrer et al., 1999; van der Doef & Maes, 1998).

It is also noteworthy that employees specified a variety of organisational intervention strategies as the cause of their reduced level of stress, as this finding highlights the importance of implementing and promoting stress-reduction strategies to staff. The study established 12 categories of perceived stress-reduction strategies, however as organisations are dynamic, there may be an interplay between some of the 12 categories in that specific HR intervention strategies may have had a more widespread effect on the university sample than the number of specific intervention strategies indicate. Across the universities, for example, there were 10 statements from employees reporting that restructuring had led to reduced stress, and as a result of the restructuring, it is likely that there were changes to an employee's work role, and/or to their supervisor or manager, and/or to their work colleagues.

The qualitative results based on 181 employees' self-reports of reduced stress indicate positive changes in employee well-being and the psychosocial work climate within universities for those employees. Indeed, the results suggest that there may be

a relationship between employees' perceptions of effective stress-reduction strategies and the HR intervention strategies that were implemented by management at the universities which participated in Study 4.

The final study in the next chapter builds upon the results of this study by examining qualitative evidence from employees at the 13 universities that participated in the Time 2 AUSS survey to determine the types of strategies that university staff overall, perceived to be effective in reducing stress between 2000 and 2003. By using a broader sample of 13 universities, this examination will provide further employee-level evidence of the types of effective stress-reduction and/or management strategies in the university context.

Study 6 is presented as a paper in the format required by the journal in which it is submitted to. The paper is preceded by a brief introduction, and followed by a brief discussion linking the paper to each other and to the project as a whole.

# Chapter 11:
# Study 6 – A Cross-Sectional Study of Stress-Reduction Interventions: Employees' Perceptions of What Works

## 11.1 Introduction

This study extends the research in the preceding chapter, as it reports on a cross-sectional qualitative study that examines employee-level perceptions of the types of organisational stress-reduction intervention strategies that were effective in reducing stress in a broader university sample. The study replicates much of the previous chapter but was conducted on all of the 13 universities that participated in the Time 2 AUSS, and was submitted for publication.

The following paper is presented in the format required by the Journal of Organizational and Occupational Psychology and is currently under review.[5]

## 11.2 Paper Under Review

Pignata, S., Winefield, A. H., Provis, C., & Boyd, C. M. (under review) Stress-reduction Interventions: Employees' Perceptions of What Works. *Journal of Organizational and Occupational Psychology*.

[5] Aspects of this paper were presented at the 2008 Australian Psychological Society (APS) Annual Conference, Hobart, Tasmania, 23-27 September, 2008. Pignata, S., & Winefield, A. H. (2008). *Stress-reduction Interventions: Staff perceptions of what works.*

# STRESS-REDUCTION INTERVENTIONS: EMPLOYEES' PERCEPTIONS OF WHAT WORKS

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**ABSTRACT**

To address the paucity of research evaluating stress interventions, this study investigates employee perceptions of the effective stress-reduction measures implemented at 13 universities between 2000 and 2003/4. Non-casual staff were surveyed at two time-points in 2000 and 2003/4. Based on results from the 2000 survey, interventions were recommended to improve employee well-being. In the 2003/4 survey, staff were asked to indicate whether their overall level of stress had changed during the previous three/four years, and if so, to describe the major causes of the change. In the sample, 462 employees reported that their level of stress had decreased. Thematic analyses showed that the key perceived causes of decreased stress were changes in job or work role, new Heads of Department or supervisors, the use of specific organizational strategies to reduce and/or manage stress (i.e., leadership development, family friendly policies, counselling services), increased personal resources and attributes, and increased staffing resources and systems. These results identify the importance of organizations implementing multi-level strategies to enhance employee well-being. Future directions for research and practice are also discussed.

*Keywords:* stress interventions, stress-reduction, universities, stress, well-being

## Introduction

The current study focuses on interventions to reduce occupational stress, as experienced by individuals at work. Occupational stress is a multi-faceted problem that has increased in recent decades as the nature of work has shifted from physical demands to psychological and emotional demands (Cooper, 1998). This rise has been linked to the worldwide interconnectedness inherent in globalisation, economic rationalism, the impact of information technology and the technological and competitive trends affecting organizational structure and demands in modern economies (Niedhammer, Tek, Starke, & Siegrist, 2004; Ostry, Kelly, Demers, Mustard, & Hertzman, 2003).

Work-related stress is defined as "the adverse reaction people have to excessive pressure or other types of demand placed on them" (Health Safety Executive [HSE], 2007, p. 7). As it is a state characterised by high levels of arousal and distress and often by feeling unable to cope, stress can manifest as psychological symptoms including anxiety, depressive disorders, burnout (Cohen, 2000; Jamal, 2004); physiological symptoms including cardiovascular disease (Bosma, Stansfeld, & Marmot, 1998), musculoskeletal and gastrointestinal disease, and hypertension; and/or behavioral symptoms including sleeping problems and insomnia (Cooper & Quick, 1999), high risk patterns of alcohol consumption (Burke & Mikkelsen, 2006), and deteriorated interpersonal relationships (Dollard, Winefield, & Winefield, 2001; Jellis, 1996).

A stress management intervention has been defined as "any activity, program, or opportunity initiated by an organization, which focuses on reducing the presence of work-related stressors or on assisting individuals to minimise the negative outcomes

of exposure to these stressors" (Ivancevich, Matteson, Freedman, & Phillips, 1990, p. 252). Interventions are often classified into primary, secondary or tertiary approaches (Cooper & Quick, 1999). Primary interventions are long-term approaches that modify or reduce demands and stressors (i.e., reducing staff workloads). Secondary preventions modify or change the individual's stress response to inevitable or unchangeable demands (i.e., stress management programs). Tertiary preventions treat an individual's distress by providing professional medical treatment or psychological counseling to heal specific problems (Cooper & Quick, 1999).

Determining the relationship between psychosocial factors (i.e., any organizational factors and interpersonal relationships in the work setting that may affect the health of workers) and specific organizational outcomes can assist management to determine where to focus an intervention and where to measure its effects (Carr, Schmidt, Ford, & DeShon, 2003). Thus, work stress interventions may target the individual in order to improve employees' coping resources in order to deal with demanding situations (Giga, Cooper, & Faragher, 2003), the organization in order to reduce the stressors (Beehr & Newman, 1978), or the interface between the individual and the organization. Giga, Noblet, Faragher, and Cooper (2003) assert that a combination of multi-level intervention strategies are likely to be most effective in reducing stress as they address the organizational environment, the individual, and the individual-organization interface.

Despite the wide variety of programs to manage stress and improve employee well-being, the paucity of evaluative research on stress interventions has been well documented in the literature (Caulfield, Chang, Dollard, & Elshaug, 2004; Cooper, 2001). Reasons for this are primarily due to the methodological and conceptual difficulties inherent in stress-intervention research. Calls for more rigorous

evaluation of interventions are not novel (see Giga, Noblet, et al., 2003). Hence, the present study aims to answer a call for research to address the fundamental question of "why should and how could organizational level stress interventions work?" (Briner & Reynolds, 1999, p. 648), by examining employee-level perceptions of interventions to determine what types of strategies are effective in reducing stress.

The study draws from the emerging positive psychology movement and on an article by Luthans (2002, p. 695) on the need for and meaning of a positive approach to organizational behavior, as the organizational behavior field "needs a proactive, positive approach emphasizing strengths, rather than continuing in the downward spiral of negativity trying to fix weaknesses". Thus, in line with the growing positive psychology literature, this study will focus on interventions incorporating employee well-being and morale building activities, and their potential to reduce strain in employees within the university sector.

We acknowledge the need for research to be theory driven and the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2007; Bakker, Demerouti, & Schaufeli, 2003; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) is a framework that is relevant for use in examining the complex mechanisms linking job demands and resources at work. The two-factor JD-R model provides a contextual framework and theory to explain and describe how two key psychosocial factors (demands, resources) and their combinations predict morale and distress on the one hand and motivation and performance on the other. Job demands are the physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological effort or skills, and may become stressors when meeting them requires considerable effort (the health impairment process; Bakker & Demerouti, 2007). On the other hand, job resources are the physical, psychological,

social, or organizational aspects of the job that may reduce job demands and the associated physiological and psychological costs, aid in achieving work goals, or stimulate personal growth, learning and development (the motivation process; Bakker & Demerouti, 2007; Demerouti et al., 2001; Schaufeli & Bakker, 2004). Research has identified the key types of job resources as: autonomy, social support, management supervision, performance feedback, and opportunities for professional development (Bakker & Demerouti, 2007).

The motivational hypothesis of the JD-R theoretical model is that increased opportunities for personal growth, learning and development link job resources to beneficial organizational outcomes through morale and positive work attitudes (e.g., job satisfaction, organizational commitment). This is consistent with Hobfoll's Conservation of Resources (COR) theory (2002) which posits that people are motivated to obtain, retain, and protect their resources, which can be material, social or energetic. Those personal resources affect each other and exist as a resource pool that represents a set of internal personal resources that facilitate the development and use of other resources (Hobfoll & Shirom, 2000). However, the energy depletion hypothesis of the JD-R model predicts that while active coping will be used to meet increased job demands in the short term, over a prolonged period of time, an individual's performance will be reduced as their capacity and energy to meet the perceived demands will become depleted (see Demerouti, Bakker, Nachreiner, & Schaufeli, 2000; Schaufeli & Bakker, 2004).

The present study applies the motivational hypothesis of the JD-R model to propose that job resources such as stress management or reduction interventions may play extrinsic motivational roles in helping to achieve work goals and reduce job demands (i.e., better working conditions, increased job security, improved

management supervision, increased performance feedback). Further, interventions may play intrinsic motivational roles in assisting to achieve work goals and reduce job demands (i.e., greater autonomy, enhanced training and development programs, greater role clarity). Indeed, employees who have high levels of resources available to them are more capable of dealing with demanding work conditions (Bakker, Demerouti, Taris, Schaufeli, & Schreurs, 2003). This may lead to work engagement where employees are more creative and more productive (Bakker & Demerouti, 2008) and result in positive outcomes such as extra-role performance (Bakker, Demerouti, & Verbeke, 2004). As work environments that offer many resources can foster morale, the stress interventions implemented at universities will reflect the resource component within the JD-R model.

The aim of the present study was to determine what types of stress-reduction strategies employees perceived to be effective in reducing occupational stress (*Research Question 1*). The present study used thematic analyses to identify the effective stress-reduction strategies. Given that the most effective intervention strategies are multi-level interventions that combine organizational as well as individual strategies (Nytrø, Saksvik, Mikkelsen, Bohle, & Quinlan, 2000), the perceived interventions were categorised into individual, organizational, and individual/organization interface directed interventions in accordance with the DeFrank and Cooper (1987) classification of occupational stress management programs. This classification process may assist organizations, particularly universities, to evaluate the effectiveness of existing strategies and aid them to target further strategies.

# Method

## The University Context

A nationwide longitudinal study of occupational stress in Australian universities investigated current levels of stress (i.e., high levels of psychological strain and low levels of job satisfaction) in tenured and contract staff at 17 universities (see Winefield, Gillespie, Stough, Dua, Hapuarachchi, & Boyd, 2003). A focus group study (Gillespie, Walsh, Winefield, Dua, & Stough, 2001) and a Time 1 survey of 8732 staff at 17 universities in 2000 confirmed very high levels of psychological distress and perceptions of excessive workloads. Both studies found that university staff were highly stressed with key potential stressors identified as insufficient funding and resources, increased workloads, poor management practice, reduced prospects for career development and insufficient recognition and reward (Gillespie et al., 2001; Winefield et al., 2003).

Based on those findings, Winefield, Gillespie, Stough, Dua, and Hapuarachchi (2002) proposed that universities implement multi-level interventions to improve health and morale in their institution including: increasing staff awareness of Employee Assistance Programs (EAP); reviewing the fairness of promotion, redundancy and performance appraisal procedures; reviewing teaching and research demands, and the adequacy of pay, promotion and recognition systems; developing leadership capabilities; developing communication processes and systems to reduce and/or help staff to cope with job insecurity; and implementing strategies to increase financial and staffing resources. A follow-up survey of staff at 13 of the original 17 universities in 2003/04 showed that despite increases in psychological strain, there were important improvements in certain areas (e.g., increased trust in senior

management, commitment to the organization, perceptions of procedural justice). We access data from employees at 13 universities who provided feedback regarding any perceived changes to their level of stress, and the types of resources or strategies that they perceived to be effective in reducing stress.

**Participants and Procedure**

A total of 6301 participants responded to the follow-up (Time 2) survey at 13 universities, and 4582 responded to the measure of employees' perceptions of stress-reduction strategies described below.

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Insert Table 1 about here

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As shown in Table 1, of the 4582 respondents to the measure of stress level, 509 (11%) reported that their level of stress had decreased (28% academic staff, 72% non-academic staff; 31% males, 68% females, 1% not identified). Secondly, 1266 (28%) reported no change (30% academic staff, 64% non-academic staff, 6% not identified; 33% males, 61% females, 6% not identified). Finally, 2807 (61%) reported that their level of stress had increased (42% academic staff, 51% non-academic staff, 7% not identified; 37% males, 55% females, 8% not identified).

A total sample of 509 academic and non-academic staff reported that their level of stress had decreased between 2000 and 2003/04, and 462 respondents remained at the same university during both survey waves. The present study will focus only on responses from those 462 participants.

The Time 2 questionnaires were distributed and accessed electronically by staff at 12 universities in 2003 and at one university in 2004 (see Winefield et al., 2003).

To ensure maximum participation and preserve confidentiality, the survey was conducted anonymously, however respondents could be matched at the two times through the use of code identifiers.

## Measures

The Time 2 questionnaire included an evaluation component to investigate the stress-reduction strategies that were implemented after the Time 1 survey.

*Perceptions of Stress-Reduction Measures.* Employees' perceptions of stress-reduction interventions were assessed by asking staff: "Has the overall level of stress you experience at work changed during the last three/four years?" The five response options ranged from (*Yes, Decreased a lot*) to (*Yes, Increased a lot*). If staff answered yes, they were asked to describe briefly the major causes of the change in their level of stress. This open-ended question allowed space for multiple responses.

## Qualitative Analysis

The qualitative analysis was conducted by the author and a second, independent, rater. Specifically, we looked for work-related or personal conditions that the respondents described as enabling their perception of reduced stress at work. We proceeded to search for patterns and themes using thematic analysis. Thematic analysis is a process where the data are organized according to patterns in the information (Boyatzis, 1998). The themes were generated based on the theory of the JD-R model: reduced job demands, increased or better use of job resources, and mobilisation of personal resources. Personal resources refer to aspects of the individuals' ability to control and adapt to their work environment (i.e., self-efficacy, optimism: Hobfoll, Johnson, Ennis, & Jackson, 2003). A coding grid was created to separate the data according to the themes during the analysis stages. The data were

coded in several stages. At the first stage, the survey responses were read and the responses were categorised as representing the themes of: (1) reduced job demands, (2) increased or additional job resources, (3) personal resources, (4) factors intrinsic to the employee's job, (5) role in the organization, (6) relationships at work, (7) reward and recognition, (8) organizational structure and climate, and (9) extra-organizational resources. Verbatim quotes where participants explained their experience were noted. A list of the key stress-reduction strategies perceived by all respondents was compiled.

At the second step, a coding guide was created defining each category within each meta-theme. Sub-themes were identified and after combining closely related categories, 13 discrete categories of reduced job demands, job resources, and personal resources were recognised. The categories were: (1) changes in job or work role; (2) harnessing personal resources of positive or protective coping strategies; (3) specific organizational intervention strategies; (4) increasing staff or resources and/or systems; (5) new Head of Department, supervisor or management; (6) colleague relationships and/or support; (7) success, recognition or promotion; (8) reduced working hours and/or employment status; (9) greater role clarity; (10) increased job security; (11) physical and/or work environment characteristics; (12) improved communication processes; (13) reduced student numbers; and the final category of "other" which consisted of responses that could not be assigned to the aforementioned 13 categories. At the third stage, an independent coder analysed 10% of the transcripts to ensure inter-rater reliability of the analysis. Any discrepancies in coding were discussed until an agreement was reached by all coders.

Table 3 provides examples of the coding for each type of response. The manifestations of resources were described for each case in terms of individual, organizational and individual-organization interface strategies.

## Results

The following table details the perceived causes of changes in stress from participants ($N$ = 462) who reported that their level of stress had decreased after the Time 1 survey, and those who remained at the same university during both survey waves.

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Insert Table 2 about here

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As can be observed from Table 2, the qualitative statements from respondents, who reported that their level of stress had decreased, indicated dominant themes of: changes in job or work role (165 statements); changes in Head of Department, supervisor, or management (76 statements); the use of specific stress-reduction and/or management intervention strategies (76 statements); personal resources (71 statements); and increasing staff and/or resources or systems (65 statements). Table 2 also shows that employees perceived that a combination of individual, organizational, and individual/organization interface level strategies were related to a reduction in their levels of stress.

Table 3 provides examples of the coding for each type of response.

Insert Table 3 about here

**Changed job or work role (24%)**

Based on the qualitative data analysis, a change in job or work role was the most frequent reason for experiencing reduced stress at work as it was reported by 24% of the respondents, for example:

> *'Changed job within the University from a unit undergoing significant (and poorly managed) change to one which is extremely well managed and provides excellent service to its customers'.*

Many employees reported changes to their work practices, duties or jobs and they felt less pressured as a result. Thus, for example, two employees from one university reported that they were no longer a Head of Department, whilst another: '*went from teaching/research position to research only position*'. However, for other employees, a '*busier work role'* and the completion of major projects resulted in reduced stress: '*Major projects to correct system and audit issues are completed'*

Statements referred to reduced workloads and reduced work or time pressure:

> *'I have a LOT less work than I used to. 3 years ago, 180% of my time was allocated (!) and my supervisor was unsympathetic'.*

Statements referred to employees returning to former work roles or being instrumental in bringing about beneficial changes by utilising their learned skills in their new role: '*changed jobs back into straight academia from being head of admissions'*. Whereas, another employee was relocated away from a frustrating project: *'Relocated away from major disastrous Project that wasn't going anywhere - was frustrating, waste of my time, poorly managed'*.

**New Head of Department or Supervisor or Management and/or increased support (11%)**

Managerial changes and new supervisors or Heads of Department in particular, were a source of reduced stress for 11% of respondents:

> *'There was a change in our Head of School. This significantly reduced the stress due to the change in leadership. This has resulted in a fairer system and better care for the human resource'*

Several employees reported that they disliked previous management structures or had poor relationships and/or conflict with their previous managers:

> *'...change of supervisor. The earlier supervisor had absolutely no people skills nor listening skills'.*

> *'A restructure in 98-9 was catastrophic, with all managers appointed at that time now departed or moved. We have just appointed a new manager who seems fine so far. I have had nothing but contempt for our managers for three years, so this is a big improvement'.*

As an employee's relationship with their supervisor embodies a degree of perceived organizational support, interpersonal conflict between employees and their supervisor is detrimental, as the perception of a less supportive work environment lowers job satisfaction and organizational commitment, and increases turnover intention (Rhoades & Eisenberger, 2002).

In addition to a reduction in employees' conflict with management, statements referred to positive, supportive and '*empowering'* relationships between employees and their supervisors or managers. Employees referred to new respectful relationships with open communication:

> *'New head of school has a caring and listening approach and seems to ACT ON this - predecessors didn't'.*

> *'The Division Head was replaced with a much more capable and open person who is working with me to re-establish a meaningful role for myself in the Division'.*

This is consistent with research by Lobban, Husted, and Farewell (1998) who found that supervisory styles (i.e., providing direction and communicating with employees) may play a dominant role in the stress process and that supervisory relationships, either directly or mediated by other job characteristics, have a strong additional influence on occupational stress that cannot be explained by job demand or control variables. Further, this is in line with research in the university context by Sargent and Terry (1998) that examined the moderating effect of social support in 135 full-time administrative employees and found that high levels of social support from supervisors buffered the adverse effects of high strain jobs on levels of job satisfaction and depersonalisation.

Indeed, it is notable that a Head of Department was instrumental in reducing employee stress indirectly by reducing job demands within the department: *'Mainly due to our head of department who was very careful about workload allocations. It was her specific and explicit intention to reduce and control staff workloads.'*

**Specific intervention strategies (11%)**

Specific organization-level intervention strategies were reported by 11% of the respondents who referred to a range of organizational interventions including organizational changes and restructuring, flexible work practices, family-friendly policies, and health and well-being programs. Employees referred to greater management awareness of the negative effects of excessive working hours, and as a result, there was a focus on management strategies to redesign, reduce and re-distribute workloads, change or reduce working hours, and reduce overtime hours.

'*Work has been designed to be more manageable*'.

'*Management have noted the excessive overtime (mostly unpaid - time off in lieu)*'.

'*Individual load has decreased, used to work up to 100 hours a week, 35 hour shift's'*.

'*Counselled to more often work only 7 hours 35 min as required. I often work up to an extra hour each day, several times per week, because I know things need to be done by certain deadlines'*.

Most statements described specific strategies, including organizational changes, restructuring departments or schools, more effective and efficient management and infrastructure support, leadership programs to provide managers with *'tools to deal with difficult situations'*.

Employees reported improved induction, support and development policies for new employees. Statements also referred to greater access to flexible work practices such as flexitime and working from home policies, and family friendly policies: '*Work Life Balance Strategies - have allowed me to work 48/52 and take more holidays to spend with my kids'*.

Statements from employees referred to the increased awareness of stress and stress management in their workplace, and specific training for managers and supervisors to identify and deal with work related stressors: '*increased stress management workshops, also stress management integrated in other workshops i.e., leadership courses'*.

Statements described strategies targeted at the individual-organization interface that aimed to enhance interpersonal and social relations by increasing the number of opportunities for employees to socialise: *'Many extra-curricular activities e.g. social events, inter-departmental sports events and outings'*.

Strategies were also directed at the individual-level including the university's Employee Assistance Program (EAP): '*I had counselling through EAP to assist me with problems I was having with a co-worker'*. Other person-directed strategies were

ergonomic advice regarding workstations, the provision of nutrition and relaxation sessions, exercise and healthy living seminars, yoga classes, and university subsidised massage treatments: '*The University paid for all staff to receive free massages, this occurred twice and was an amazing experience'*.

Indeed, employees' perceptions that the provision, promotion, and access to the aforementioned Human Resource (HR) management strategies was associated with a reduced level of stress, is consistent with research by Teo and Waters (2002) who found that a supportive organizational environment in which numerous employee-friendly HR policies were present has a direct, negative effect on interpersonal strain and plays a role in reducing occupational strain.

**Increased personal resources (10%)**

Employees' statements were coded as relating to this theme when they described utilising or developing their own resources, learning new skills or changing their attitudes. This theme was reported by 10% of respondents. The category was recoded further into the two categories of 'positive' and 'protective' coping strategies or attitudes, in order to distinguish between the reports of increased self-efficacy and optimism, and the reports of employees withdrawing from their work role in order to cope. Any statements reflecting disengagement and reduced striving to meet the expectations of others were categorised as 'protective' coping strategies.

Positive coping decisions were reported by 8% of employees and included increases in self-efficacy, maturity, and improvements in their personal outlook. Indeed, research by Xanthopoulou, Bakker, Demerouti, and Schaufeli (2007) found that personal resources mediated the relationship between job resources and engagement or exhaustion and influenced the perception of job resources.

Several employees reported that they needed to manage and address their own stress levels better in order to model the appropriate behavior to others:

> '*More awareness. I also counsel people who are stressed in the Uni, so I feel that I also need to role model and "practice what I preach".*
>
> *'Learnt how to manage stress better'.*
>
> *'I decided to self manage my stress levels via time management'.*

Another employee reported that spending more time with their family reduced their level of stress: '*Taking more time to do family duties has relieved a lot of stress over the past year and a half*'.

However, 2% of respondents reported using protective strategies: '*I have cut what I expect of myself',* or making decisions to work less and care less about their work, prospects for promotion, research and career goals in order to decrease their level of stress:

> *'I have adopted a personal approach of "stuff it" to try to gain more control and more self respect for my efforts'.*

In terms of the JD-R model, it can be speculated that those protective strategies are related to the de-energising hypothesis which predicts that as a result of increased job demands over a prolonged period of time, an individual's performance will be reduced as their capacity and energy to meet those perceived demands becomes depleted (Demerouti et al., 2000; Schaufeli & Bakker, 2004). However, it can also be speculated that those employees may have become disengaged or detached as a protective coping strategy in order to protect their resources (Hobfoll et al., 2003).

**Increased staff or resources or systems (10%)**

Increases in staffing and resource levels were reported by 10% of respondents. Management were seen to have employed additional staff as a means of reducing

excessive workloads: '*Problem areas have been identified and more staff have been employed to get the job done correctly and efficiently'*. The majority of statements referred to additional staff being employed to share the work, particularly for employees who had previously felt overwhelmed by their workload:

> '*Assiting position to me was finally filled after 12 months'*.
>
> '*Addition of a full-time administrative officer to support me after approx. 18 months of having an excessive workload'*.

Statements referred to improvements in the university's recruitment and selection processes as *'more top level'* and '*quality*' staff were recruited and appointed. Further, positions were filled after lengthy delays:

> '*Assisting position to me was finally filled after 12 months'*.
>
> '*Addition of a full-time administrative officer to support me after approx. 18 months of having an excessive workload'*.

Employees reported additional staffing and training resources within their workplace, as statements referred to the employment of additional support staff and teaching support such as demonstrators for practicals. There were also improvements in stress levels due to the implementation of computer systems and new work processes to improve productivity:

> '*Less student contact because of Peoplesoft [software program]'*.
>
> *'Improved work flow processes and implemented systems that were more efficient. Many of these did not even exist when I first began working in the position'*.

**Improved colleague relationships or support (8%)**

Colleague relationships or support were an important resource for 8% of respondents. Statements referred to colleagues providing emotional support as a type of stress relief:

'*...new workmates who offer companionship and mutual support and ideas'.*

*'I recently changed work and my new work environment is much much less stressful then the previous one mostly thanks to my direct supervisor and co-workers'.*

Statements referred to high social support as a growth factor as respondents referred to co-workers as 'workmates', 'very good confidants' who motivated and stimulated them, and with whom they shared humour, expertise and understanding:

'*I've moved to a happier work environment, with interesting work and colleagues who have senses of humour and perspective'.*

Employees also highlighted teamwork, harmony and team spirit as important resources:

*'SEO has engaged in a restructure of the Front office procedures and has brought in new staff. The three new staff (myself included) are a fairly cohesive and effective team. The previous three (myself included) did NOT work well as a team...I am quite astounded at the improvement in some areas...there is no longer the same level of acrimony'.*

Statements referred to moving to work areas or departments with a familial, more easy-going and less formal atmosphere, and supportive job sharing strategies such as team teaching to share the teaching load, and cross training skills schemes:

'*We have implemented a cross training scheme where we all share skills and teach each other so that during peak periods we can share work. As we work in slightly different areas our timelines aren't all alinged so we can often call on others to assist'.*

As research shows that social support provides a stress-buffering effect on an individual's health and well-being (Cohen & Wills, 1985), benefits for the organization in terms of effective teamwork and staff retention were identified: '*Existing staff in my area are now tending to stay, rather than leave...'.*

Employees also reported a reduction in co-worker conflict, as '*nastier staff have now left'*. This statement is in line with research by de Dreu, van Dierendonck, and de

Best-Waldhober (2002) who found that interpersonal conflict was related to lower levels of employee well-being and work-related attitudes.

**Greater role clarity (6%)**

The theme of greater role clarity reported by 6% of respondents included items such as greater confidence and experience in their own abilities to undertake their work role. Statements referred to becoming more accustomed to the workplace, feeling more experienced and familiar with the job and related tasks and the ensuing greater confidence in their own abilities to undertake their work:

'*...more confident in what I'm doing'.*

*'... increased experience of my role'.*

*'Have settled into the 'new' job and am more familiar with the expectation'.*

In terms of the motivational pathway of the JD-R model, intervention strategies which increase the clarity of an employee's work role may play motivational roles in assisting them to achieve work goals and reduce the demands of their job. In regards to job and task characteristics, a recent meta-analytic review by Örtqvist and Wincent (2006) showed that the role stressors of role ambiguity, conflict and overload were related to work stress outcomes including increased tension, burnout and turnover intentions, and lower levels of job satisfaction and organizational commitment. Given that prior research found that role ambiguity was associated with occupational strain (Cooper & Marshall, 1978; Elovainio & Kivimäki, 2001), it is not surprising that employees reported greater role clarity as a source of reduced stress.

**Increased success or recognition or promotion (5%)**

Statements referring to success, recognition or promotion as a perceived cause of reduced stress were reported by 5% of respondents. Several employees reported that

promotions and a higher level of salary had led to a reduction in stress. Whilst rewards such as salary are tangible monetary rewards, other intangible rewards such as appreciation from a supervisor, manager or colleagues were also important to employees as several statements referred to feeling recognised and feeling an increased sense of achievement:

> '*...given more responsibility and acknowledged for work effort'.*
>
> *'...now trusted with more responsible and complex projects and presented with more opportunities to express my own opinion, which brings its own stress but is also more rewarding'.*

Statements referred to dynamic responsibilities, non-monetary incentives, and socio-emotional rewards such as an increased feeling of belonging which made them feel valued and recognised:

> '*Have received non-monetary incentive in the form of work paying for my current (part time) course fees. Has given me the message that I am valued as a staff member, and my career is worth developing'.*

Employees felt that they had '*proved'* themselves to their co-workers by increasing their work status from part-time to full-time or that there was greater recognition and acceptance of their ideas: '*Radical projects I have initiated are now accepted as mainstream - reducing stress and feeling of risk taking'*. Indeed positive recognition from an employee's manager had led to increased training and development opportunities:

> '*Manager willing to give opportunities to learn and develop - been on courses seminars workshops and training to develop skills. Given opportunities to do project work and work of a higher level'.*

Statements relating to recognition and positive feedback are in line with research by Elovainio and Kivimäki (2001, p. 375) who showed that employees need structure to their work environment and feedback provides a source of informational support

that can assist them to function effectively at work, and without it, they experience role ambiguity as they "do not know what is expected from them at work".

**Reduced work hours or employment status (4%)**

Employees were also proactive in reducing their job demands, as approximately 4% of respondents elected to reduce their working hours or change their employment status from full-time to part-time employment:

> *'To reduce personal stress, I decided to change jobs and look for a 0.8 position instead of full time. I was lucky enough to get a suitable position within the university almost straight away'.*

Other employees moved to a lower level or a casual job:

> *'I opted to take a secondment to a lower HEW job for 6-12 months to ease the pressures on myself'; "left my full time senior lecturship to become casual'.*

**Improved physical or work environment characteristics (3%)**

Almost 3% of respondents stated that changes in the characteristics of their physical or work environment resulted in a positive change in stress levels. Employee statements referred to working in less competitive work environments:

> '*...more relaxed working environment. I work at a smaller campus'.*
>
> *'Slight slower pace in work environment due to culture and nature of organisation'.*

Other statements referred to changes in the physical location of their workplace and the ensuing positive benefits of the relocation:

> '*New physical location offering excellent working environment'.*
>
> *'Change of environment to a much more pleasant office and more convenient location'.*

Moreover, the physical design of new office space allowed employees to interact better with their team: '*...more suitable office space provided - allows work group to come together'.*

**Increased job security (3%)**

Almost 3% of respondents associated increased job security with reduced stress. Indeed, research shows that work characteristics including job insecurity, and a lack of development opportunities are indicative of low control and may cause a lasting stress response (Mikkelsen & Gundersen, 2003). Statements referred to being awarded tenure and having continuing work or a secure or permanent position:

'*Current position seems quite stable, with some prospect for advancement'.*

*'Changed from casual temporary to part-time permanent position'.*

*'Current department is taking over others rather than being in danger of being taken over'.*

An employee referred to the consequences of increased job security in terms of gaining increased confidence and flexibility:

*'I have a longer term fellowship now than I did a year ago, and project grant funding for my staff that is more stable. This has given me job security, more confidence, and more flexibility with my work'.*

**Improved communication processes ( 1%)**

The category of improved communication processes was reported by 1% of respondents. The statements referred specifically to improvements by management in sharing information with work areas:

*'Well informed of plans involving my area'.*

*'More direct communication with all areas of the university'.*

**Reduced student numbers ( < 1%)**

Statements referred to reduced stress due to teaching fewer students due to lower enrolments or having few or no postgraduate students to teach.

## Discussion

The present study investigated the specific factors that university staff perceived to contribute to decreases in occupational stress between two time-points. With regard to decreases in their perceived level of stress, the key theme that emerged from the data was that changes in job or work role reduced stress for 24% of the respondents. However, it is not known whether the role changes were initiated by the employees themselves, or by the employer.

Other dominant themes were: management or supervisory changes, particularly the appointment of new Heads of Departments; the provision and use of specific HR stress-reduction and/or stress management strategies which highlights the importance of implementing organizational strategies to enhance employee well-being, and to ensure that staff are made aware of them. The strategies that were reported included: job redesign, restructuring of departments, leadership development programs, flexible work practices, family friendly policies, EAPs, stress awareness raising programs, and exercise programs.

In terms of the JD-R model, increased job resources in the form of workplace practices and strategies that changed or reduced workloads, improved management supervision, enhanced interpersonal relationships, increased performance feedback, and increased staffing resources and systems appear to have helped employees to achieve their work goals and reduce job demands, and may have led to reductions in employee levels of stress.

Other key themes were the use of personal resources or attributes including increases in self-efficacy, having a positive outlook and an increased ability to self-manage stress. Thus, individuals were able to activate and increase their personal resources in order to cope with stress (Xanthopoulou et al., 2007). However, 2% of employees used protective coping strategies of not caring at all, and making decisions to work less which suggests that these individuals have become disengaged or detached as a protective coping strategy in order to protect their resources (Hobfoll et al., 2003), and their work performance may be reduced in the long term.

Supportive interpersonal relationships between employees and both supervisors and colleagues was a dominant theme in the present study. Social support has been defined as "the operation of networks within the organization that are interposed between the stress-producing aspects of the organization and the individual" (Jones, Flynn & Kelloway, 1996, p. 50). Social support includes instrumental support (i.e., additional resources or assistance in performing your work) and emotional support or socio-psychological esteem.

The importance of a good social support system in the workplace is highlighted in the Job-Demand-Control-Support (DCS) model of work stress (Johnson & Hall, 1988) as the premise of the model is that the interaction of job demands, job control (job decision latitude) and workplace social support predicts employee health and well-being. Thus, for example, the support of colleagues and superiors may modify the association between job strain and the emergence of health problems by acting as an antidote or protective factor (Johnson & Hall, 1988). Indeed, the results point to the benefits of increasing supervisor and colleague support in universities and other organizations. This appears consistent with research by Sargent and Terry (1998) which found that high levels of social support from supervisors buffered the adverse

effects of high strain jobs on job satisfaction and depersonalisation in administrative university staff. Perhaps interventions may need to target specific schools or organizational units, as opposed to adopting broad, institution-wide approaches.

**Practical Implications**

There are several implications for management. The use of a qualitative approach provides a deeper and realistic insight into the issues and experiences of university employees (Lee, 1999) than do quantitative approaches alone, which allows for an enriched understanding of the resources in the university sector. From an applied perspective, the positive evaluation of some of the measures undertaken by the universities may assist university management to maintain or enhance current strategies or develop new strategies. It would be of interest to examine employee perceptions at an organization-level to determine whether individuals within the same university share similar perceptions.

Bradley and Sutherland (1994) suggest that employees may need to view stress management as personally relevant (i.e., they have personal experiences of stress at work and believe that they may be susceptible to stress in the future) in order for it to be effective. Hence, it can be speculated that the effectiveness of stress-reduction interventions on psychological strain, and organizational attitudes may depend on an individual's self-awareness of stress and/or a positive awareness of the availability of relevant intervention strategies. Indeed, the strength of a HR system is determined by various characteristics including whether the processes and outcomes of HR practices are *visible* to employees covered by them, whether available information about practices are *clear* to employees, and the *acceptability* of the practices to employees (Ostroff & Bowen, 2000). Hence, a strong HR system has salient HR practices that are communicated strongly to employees (Ostroff & Bowen, 2000). It is also

noteworthy that employees specified a variety of organizational intervention strategies as the cause of their reduced level of stress, as this finding highlights the importance of university management implementing and promoting stress-reduction strategies to staff. It is then up to employees to harness those interventions or resources.

**Limitations and Future Research**

The reported results should be interpreted with the limitations of the study in mind. First, the study provided evidence of subjective perceptions of effective stress-reduction strategies only, hence it is important to obtain independent evidence of stress-reduction strategies from each of the universities themselves. A second possible limitation is the cross-sectional design of the study. Although the study provided rich and comprehensive data that allowed the global concerns of university staff to be captured, a longitudinal design would have provided an insight into the role of job factors in occupational stress across time. We were unable to access longitudinal data for this study as there were limited responses to the measure referring to any perceived changes in employees' stress levels. Future research should examine the longitudinal effects of organizational stress management interventions. Nevertheless, the qualitative results based on employee self-reports indicated positive changes in employee well-being and the psychosocial work climate within universities for employees.

In line with the positive psychology movement, the present study adopts a positive approach by emphasizing employees' perceptions of positive changes to their working environments. In summary, thematic analyses found that the key perceived causes of decreased stress were changes in job or work role, new Heads of Department or supervisors, the use of specific organizational strategies to reduce

and/or manage stress (i.e., leadership development, family friendly policies, counselling services), personal resources and attributes, and increased staffing resources and systems. These results identify the importance of implementing multi-level strategies targeted at individuals, the organization and the interface between the individual and the organization in order to reduce occupational stress. A key finding is that supportive interpersonal relationships, particularly between employees and their supervisor or Head of Department, appear to be a salient feature for university employees in terms of reducing their levels of stress, and improving their health and well-being.

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Table 1

*Demographic Details of Employees' Responses to Measure of Stress Level (N = 4582)*

| | | **Gender** | | | **Staff Group** | | |
|---|---|---|---|---|---|---|---|
| **Stress Level** | *N* | Male | Female | Not disclosed | Academic | Non-Academic | Not disclosed |
| Reduced | 509 | 159 | 348 | 2 | 144 | 365 | – |
| No Change | 1266 | 421 | 768 | 77 | 379 | 813 | 74 |
| Increased | 2807 | 1040 | 1555 | 212 | 1188 | 1421 | 198 |
| Total | 4582 | 1620 | 2671 | 291 | 1711 | 2599 | 272 |

Table 2

*Summary and frequency of themes*

| **Perceived Strategies** | **Number of Times Mentioned (*N* = 462)** | **Percentage from Total** |
|---|---|---|
| Changed job or work role ***Personal Choice or Organizational Level*** | 165 | 24 |
| New Head of Department/ Supervisor/ Management ***Individual /Organization Interface Level*** | 76 | 11 |
| Specific intervention strategies ***Organizational Level*** | 76 | 11 |
| Increased personal resources (Positive coping) (Protective coping) ***Individual Level*** | 71 (57) (14) | 10 (8) (2) |
| Increased staff or resources/ systems ***Organizational Level*** | 65 | 10 |
| Improved colleague relationships /support ***Individual /Organization Interface Level*** | 55 | 8 |
| Greater role clarity ***Individual /Organization Interface Level*** | 40 | 6 |
| Increased success/ recognition/ promotion ***Individual /Organization Interface Level*** | 36 | 5 |
| Reduced working hours or changed employment status ***Individual Level*** | 24 | 4 |
| Improved physical environment / work environment ***Organizational Level*** | 20 | 3 |
| Increased job security ***Organizational Level*** | 18 | 3 |
| Improved communication processes ***Organizational Level*** | 8 | 1 |
| Reduced student numbers ***Organizational Level*** | 4 | < 1 |
| Other | 25 | 4 |
| **Total** | 683 | Approx. 100 |

Table 3

*Examples of the different themes as they appear in the data*

| **Theme** | **Example** |
|---|---|
| Changed job or work role | 'Duties have changed. Now not as pressured' |
| | 'I have a LOT less work than I used to. 3 years ago, 180% of my time was allocated (!) and my supervisor was unsympathetic' |
| New Supervisor/ Head of Department /Management | 'New head of school has a caring and listening approach and seems to ACT ON this - predecessors didn't' |
| | 'There was a change in our Head of School... significantly reduced the stress due to the change in leadership...resulted in a fairer system and better care for the human resource' |
| | 'Support of Management in new role helps deal with what is potentially a more stressful role dealing with upset and angry users of the services we provide' |
| Stress intervention strategies | 'Increased stress management workshops, also stress management integrated in other workshops i.e. leadership courses' |
| | 'Improved induction, staff support and development' |
| Increased personal resources<br>• Positive coping | 'Learnt not to take it personally when I miss out on a competitive research grant' |
| | 'Mainly due to changes in my own attitude - I believe individuals create a lot of their own stress) - I was great at that, I'm now more realistic about what I can do - I also have a good working relationship with my Manager' |
| • Protective coping | 'I have adopted a personal approach of "stuff it" to try to gain more control and more self respect for my efforts' |
| | 'I don't care so much about the University. I have stopped worrying about the University and I've stopped identifying with it. So, I'm less stressed' |
| Increased staff or resources / systems | 'Number and level of staffing improved, so that less pressure on me, and can actualy undertake my mangerial roles rather than operational functions' |
| | 'Problem areas have been identified and more staff have been employed to get the job done correctly and efficiently' |
| | 'Equipment became better and more reliable' |
| Improved relationships with colleagues /support | 'I have some very good confidants among workmates' |
| | 'Working with different, more compatible colleagues' |
| Greater role clarity | 'Becoming accustomed to the job and expectations' |
| | 'Better job/role clarification' |
| Increased success/ recognition/ promotion | 'My success in gaining funding and publishing' |
| | 'Recognition of my role and contribution to the university and the school' |
| Reduced working hours or employment status | 'Changed employment status from full-time to part-time'<br>'Move from permanent position to a current visiting position' |
| Improved physical and work environmental characteristics | 'A more appropiate office and work room' |
| | 'New physical location offering excellent working environment' |
| Increased job security | 'My stress levels decrease with a longer contract. My current contract is for 12 months but in the past they have often been for only three months' |
| | 'Gaining full-time, continuing work' |
| Improved communication processes | 'More direct communication with all areas of the university' |
| | 'Greater communication by university administration as a result of staff discontent regarding budget decisions and the university's direction for the future.' |
| Reduced student numbers | 'Lower student nos. enrolled in this program' |
| | 'No Honours students to teach this year' |

## 11.3 Discussion

The research reported in this final, sixth study extended Study 5 by broadening the size of the sample from five universities to 13 universities across Australia. Similar to Study 5, the key purpose of the present study was to identify *what* types of strategies were perceived to be effective in reducing employees' levels of stress. As a result, the present study showed support for the findings in Study 5, as thematic analysis of the extensive self-report data categorised the intervention strategies into 13 similar categories: (1) changes in job or work role; (2) new Head of Department or supervisor or management; (3) specific organisational intervention strategies; (4) personal resources of positive or protective coping strategies; (5) increasing staff or resources and/or systems; (6) colleague relationships and/or support; (7) greater role clarity; (8) success, recognition or promotion; (9) reduced working hours and/or employment status; (10) improved physical and work environmental characteristics; (11) increased job security; (12) improved communication processes; and (13) reduced student numbers.

With regard to decreases in employees' perceived level of stress, like Study 5, the key theme that emerged from the data was that changes in job or work role reduced stress for almost a quarter of the respondents. The next key theme for 11% of the respondents was that management or supervisory changes, particularly the appointment of new Heads of Departments was associated with reduced levels of stress. This finding suggests that there were numerous staffing changes in supervisory and middle management positions across the universities between 2000 and 2003/04. Statements from employees also referred to the development of pastoral care relationships between employees and their Heads of Department.

The provision and use of specific organisational stress-reduction and/or stress management strategies was also a key theme reported by 11% of respondents which, similar to Study 5, highlights the importance of management implementing strategies to enhance employee well-being, and to ensure that those measures are promoted to staff. The strategies that were reported included: job redesign, restructuring, leadership development programs, flexible work practices, family friendly policies,

EAPs, stress awareness raising programs, and exercise programs. Similar to the preceding study, it is again noteworthy that a combination of individual, organisational, and individual/organisation interface level strategies were perceived by 462 employees to lead to lower levels of stress.

In terms of the JD-R model, increased job resources in the form of management strategies that changed or reduced workloads, improved management supervision and interpersonal relationships, provided flexible work practices and family friendly policies, and increased staffing resources and systems appear to have helped employees by reducing their level of stress.

It is notable that the present study examined feedback from 509 employees from 13 universities who reported a reduction in their levels of stress, whereas Study 5 examined feedback from 204 employees at five universities, who reported a reduction in their levels of stress, and those responses are included in the present study. Nevertheless, given the strong similarities between the two studies in terms of the categories of themes and employees' statements, it appears that many of the universities that participated in both waves of the Time 1 and Time 2 AUSS undertook measures to reduce employee stress between the survey waves in 2000 and 2003/04. However, this can only be speculated without documented evidence from senior HR management at those universities.

The following chapter is the final chapter in this thesis. Chapter 12 integrates and discusses the results of all six quantitative and qualitative studies, summarises the overall results of the project findings as a whole, and considers the implications of these findings for assisting management policy to enhance the health and positive work attitudes of employees in the higher education university sector in Australia.

# Chapter 12:
# Discussion and Conclusion

## 12.1 General Discussion

### *12.1.2 Key Aims*

Occupational stress is associated with significant personal, organisational, and societal costs, and as a result, interventions to reduce and manage stress are important measures that organisations can take in an effort to reduce its negative impact. The purpose of the present thesis was to investigate in six studies, the relationship between objective intervention measures implemented by management, employee perceptions of those intervention measures, and their impact on employees' levels of psychological strain and the work attitudes of job satisfaction, affective commitment to the organisation, trust in senior management, and perceived procedural justice. As highlighted in the introductory chapter, the project's key aims were to address some of the methodological and conceptual difficulties in evaluative research on stress interventions by using a combination of quantitative and qualitative data, and cross-sectional and longitudinal analyses to examine the effectiveness of stress interventions in the university sector in Australia.

The **first key aim** of this thesis was to provide an insight into the effectiveness of stress-reduction interventions from an employee's perspective by examining a potential link between employees' perceptions of HR management practices designed to reduce or manage stress at work, and changes in employee health and positive work attitudes. Study 1 (Chapter 6) employed a longitudinal design to investigate employee perceptions of intervention strategies and examined their impact on the outcomes of organisational commitment, job satisfaction, and psychological strain. By using the social-exchange model of POS discussed in Chapter 5, the study conceptualised positive employee perceptions of interventions as an aspect of POS, as the organisation's policies regarding the treatment of employees signals the extent to

which the organisation cares about the welfare of employees (Gillespie & Dietz, 2009; Kraimer & Wayne, 2004).

The longitudinal study reported in Study 2 (Chapter 7), achieved the **second key aim** to explore the role of staff group (i.e., academic, non-academic) and length of organisational tenure in relation to POS (positive employee perceptions of interventions) and attitudes of job satisfaction, affective commitment to the organisation, trust in senior management and perceived procedural justice. Given the diverse functional work roles of the two staff groups, it was of value to explore both staff categories separately in terms of their relationships to POS and employee attitudes. As discussed in Chapters 5 and 6, the social-exchange theoretical model was used to examine possible relationships between tenure, POS and employee attitudes, as longer tenure employees who have been with the organisation for longer periods of time may develop a more favourable view of their treatment by the organisation due to having had more opportunities to interact within the employee-employer relationship.

Study 3 (Chapter 8) continued the examination of work attitudinal outcomes by focusing on perceived procedural justice. As employee perceptions of procedural justice help to shape the employee-employer relationship, a **third key aim** of this thesis was to employ a longitudinal design to investigate the predictors of perceived justice. As discussed in Chapter 5, procedural justice has an ethical component due to the mutual exchange process inherent in the psychological contract between the employee and the employer. Hence, Study 3 reviewed procedural justice within the concept of ethics to understand what defines a procedure as fair.

Study 3 applied the two-factor JD-R theoretical model of stress (Bakker & Demerouti, 2007; Demerouti et al., 2001) by classifying the proposed predictors of procedural justice into the two categories of job demands and job resources. The study addressed gaps in the literature as an improved knowledge of the predictors of perceived procedural justice would enhance the understanding of the organisational-attachment process and the benefits of developing and/or maintaining a sense of procedural justice for employees, particularly within the university context, where perceived procedural justice was identified as a key predictor of stress (Winefield et al., 2002).

Study 1 also achieved the **fourth key aim** to examine the mediating influence of perceived procedural justice and employees' trust in senior management in the relationship between POS (characterised as employees' perceptions of intervention strategies being implemented at their university) and psychological strain, and morale in terms of job satisfaction, and organisational commitment. A review of the procedural justice and trust literature in Chapters 5 and 6 showed evidence of their association with POS. By applying social-exchange theory, Study 1 proposed that positive assessments of supportive stress-management practices from their organisation may create a perpetual sequence that encourages trust in senior management and/or increases an employee's perception of fair and just organisational procedures. This, in turn, may create an obligation for the employee to respond with pro-organisational attitudes such as organisational commitment, and mediate the negative relationship between POS and psychological strain.

The **fifth key aim** of this thesis was to answer a call for the content of stress-reduction strategies to be reported and evaluated in order to assess their effectiveness on employee well-being and positive work attitudes. Study 4 (Chapter 9) addressed the paucity of evaluative research on stress interventions highlighted in Chapter 3, by presenting a multi-case study of five universities to investigate the key HR interventions that were implemented by senior management at the universities, between 2000 and 2003, in order to enhance employee well-being. The study was two-fold as it: (1) investigated objective measures of the HR stress-reduction strategies implemented at the universities to determine what types of interventions may have assisted in lowering psychological strain and heightening positive work attitudes; and (2) examined employee-level responses at two time-points to investigate any changes in employee-levels of psychological strain, job satisfaction, organisational commitment, trust in senior management, and perceptions of procedural justice. Study 4 applied the theoretical framework of the JD-R model, by viewing HR intervention strategies as increased organisational resources that have the potential to reduce job demands and the associated physiological and psychological costs, or aid in achieving work goals. In addition, the intervention strategies may stimulate personal growth, learning and development, as demonstrated by the model's motivational pathway.

The responses from senior university management provided independent evidence of the intervention strategies implemented, as well as the target and extent of those interventions. The strategies were categorised according to the focus of the intervention strategy as the stress intervention literature reported in Chapter 3 highlighted the importance of organisations considering the occupational stress process and integrating this knowledge into planning and implementing organisational intervention strategies. The study also identified university-specific HR initiatives that were designed to improve employee well-being and morale.

Study 5 (Chapter 10) achieved the **sixth key aim** to employ a qualitative design to focus specifically on employees' perceptions of the stress reduction and/or management strategies that were effective in reducing stress at five universities. Study 5 built upon the results of Study 4 by examining qualitative evidence from employees at the same five universities to determine the types of strategies that employees perceived to be effective in reducing stress between 2000 and 2003. Similar to Study 4, this study applied the framework of the JD-R model of work stress by viewing HR intervention strategies as increased job resources that have the potential to reduce job demands or aid in achieving work goals, as demonstrated by the model's motivational pathway.

The **seventh key aim** of the thesis was achieved in Study 6 (Chapter 11), which examined employee-level perceptions of effective stress reduction strategies at 13 universities across Australia. The purpose of the study was to determine whether the types of perceived stress-reduction strategies identified in Study 5 could be generalised to the broader university sample. As in Studies 4 and 5, the cross-sectional study also applied the JD-R model's theoretical framework.

In the following section, the major findings from the six studies will be summarised. Where appropriate, references to previously published research will be given, and the limitations identified in the current investigation will be identified. The chapter will conclude by outlining the theoretical and practical implications of the findings, and providing suggestions for future research.

## 12.2 Summary of Major Research Findings

### *12.2.1 Study 1*

Study 1 investigated employee awareness of stress-reduction interventions and relationships with well-being and work attitudes using the social-exchange model of perceived organisational support (POS). Of the 969 participants who responded to both waves of the longitudinal AUSS (see Winefield, A., et al., 2008), this study focused on the 869 participants from 13 universities who responded to the measure of POS: "During the past 3 years has your university undertaken any measures to reduce stress among its employees?" Hierarchical regression analyses tested the impact of POS on employee levels of strain, job satisfaction, and organisational commitment. The demographic variables of age, gender, tenure, staff group (academic, non-academic) and respondent's scores on the relevant Time 1 variable were included in all analyses as control variables. Results revealed that POS was linked to improved well-being, as analyses indicated that employees who reported that interventions had been undertaken, scored lower on strain and higher on job satisfaction and commitment than those who did not perceive the measures. The demographic variables of staff group and length of organisational tenure were also found to be predictors of morale (i.e., job satisfaction, affective commitment to the organisation).

The results of Study 1 highlight the importance of using a longitudinal design and multiple regression analyses that incorporate the Time 1 levels of the dependent variables in order to examine the links from demographic characteristics such as staff group and length of tenure, and organisational resources such as POS, to work-related attitudes. Although the effect sizes for the aforementioned relationships were small, it is reasonable to assume that POS may have positively influenced those work-related attitudes.

A series of bootstrapping analyses were also undertaken to test for simple mediation. The second key finding of Study 1 was that awareness of stress interventions was related to trust and justice, as trust in senior management and perceived procedural justice mediated the relationship between POS and employee well-being, job satisfaction and organisational commitment. Consistent with research (Whitener, 2001), the study found that trust in management partially mediated the relation between POS and commitment, and between POS and job satisfaction. In

addition, trust also fully mediated the relationship between POS and strain, and perceived procedural justice partially mediated the relation between POS and strain, commitment, and job satisfaction. Bootstrapping tests for multiple mediation were also undertaken, and when trust and justice were combined, both trust in senior management and perceived procedural justice emerged as mediators in the relationship between POS and well-being and work-attitudes. These results highlight the social-exchange process between employee-organisation and suggest that employees who feel valued and believe that the organisation supports them form trust in their senior management or perceive that organisational policies and practices are fair. As a result, employees may respond with increased commitment to their organisation and/or greater job satisfaction, and/or a reduced level of psychological strain.

### *12.2.2 Study 2*

Study 2 extended Study 1 as it explored the role of staff group and tenure in relation to POS (in the positive perceptions of intervention strategies) and employee attitudes. As in Study 1, the data were based on a longitudinal population of 869 employees from 13 universities. Hierarchical regression analyses examined the contribution of staff group and tenure on POS controlling for age, gender, the interaction between length of organisational tenure and staff group, and Time 1 variable differences. The study found that being a member of non-academic staff predicted organisational commitment after the addition of POS. Further regression analyses examined any staff group differences in the effect of POS on the levels of job satisfaction, organisational commitment, trust in senior management, and procedural justice. For academic staff, perceptions of perceived support predicted job satisfaction and trust in senior management. This finding is in line with the literature on POS and social-exchange theory (Riggle et al., 2009). The results of Study 2 also showed significant differences between academic and non-academic staff, as POS predicted organisational commitment, and perceptions of procedural justice for non-academic staff only.

Differences in groups with varying lengths of tenure were identified, as employees with intermediate levels of tenure (6–19 years) held more positive perceptions of their university in terms of organisational support, job satisfaction,

trust, and commitment than those with either five or fewer years of tenure or those with over 20 years of tenure. The results also showed significant differences between academic and non-academic groups in terms of relationships between POS and attitudinal outcomes. For non-academic employees, length of organisational tenure was identified as a predictor of perceived procedural justice which suggests that perceptions of procedural justice increase the longer that they work at the university and/or employees stay longer if they have higher perceptions of procedural justice, and this result is consistent with prior research (Rhoades & Eisenberger, 2002). Similar to the results for academic employees, POS also predicted job satisfaction and trust in senior management for non-academic staff. However, for non-academic staff, POS was also a predictor of organisational commitment, and perceived procedural justice.

In sum, employees' length of organisational tenure affected the relation between POS and attitudinal outcomes. The results suggest that employees working at the university for an intermediate period of time such as 6–10 years had the most positive perceptions of their organisation in terms of organisational support, job satisfaction, trust, and commitment, whereas employees with 20–38 years of tenure had the least positive perceptions.

### *12.2.3 Study 3*

Study 3 reviewed the ethical aspects of procedural justice and the concept of psychological contracts in the employee-employer relationship. The review focused on the ethical aspects of procedural justice, psychological contracts, and the normative moral principles of autonomy, equality, and respect for individuals within employment relationships. Study 3 investigated the predictors of procedural justice in a longitudinal sample of 945 employees from 13 universities. Based on the literature outlined in Chapter 8, the study applied the two-factor JD-R theoretical model of stress (Bakker & Demerouti, 2007; Demerouti et al., 2001) by classifying the proposed predictors into the two categories of job demands and job resources. The job demands aspect of the model comprised the demands of work pressure and work-home conflict, whereas the job resources aspect of the model comprised work pressure, work-home conflict, job (in)security, autonomy, job satisfaction, organisational commitment, trust in senior management, and trust in Head of

Department. In addition to the above demands and resources, the predictor model also contained demographic characteristics (i.e., age, gender, length of organisational tenure, staff group) and the individual personality characteristics of negative affectivity and job involvement as they have been associated with occupational stress and well-being in the literature.

A series of hierarchical multiple regression analyses found that job satisfaction at Time 1 was the strongest predictor of perceived procedural justice at Time 2 which suggests an association between employees who are satisfied with their jobs, and higher perceptions of procedural justice. University employees' trust in senior management, and their length of tenure also positively predicted perceived justice. There were significant differences between academic and non-academic staff when the groups were examined separately, as non-academic employees' level of job satisfaction, trust in senior management and their length of organisational tenure were predictors of perceived procedural justice, whereas for academic staff only job satisfaction predicted perceived procedural justice.

The results highlight the importance of workplace factors in enhancing fair procedures to encourage reciprocity from university employees. For example, job satisfaction was a dominant and enduring predictor of perceived procedural justice for all staff categories, and employees' trust in senior management also predicted perceived procedual justice. As procedural justice is also conceptually linked to the psychological contract that exists between employees and employers, it is possible that employee levels of job satisfaction and perceptions of trust in senior management, relative to other work attitude outcomes, may be more effective for improving the broader working environment, and promoting staff morale.

### *12.2.4 Study 4*

The first qualitative study, Study 4, investigated the Human Resource (HR) stress management or prevention strategies that were implemented by senior management in five universities to identify what types of strategies were effective in lowering employee levels of psychological strain and heightening work-related attitudes between 2000 and 2003. The results of independent samples t-tests found that employee levels of organisational commitment and/or trust in senior management were higher at four of these universities in 2003, and employee perceptions of

procedural justice were higher at all the universities in 2003. However, employee levels of psychological strain were also higher at four universities, and job satisfaction was lower at two of the universities. The priority intervention targets in three of the universities were leadership development strategies to enhance the capacity of leaders to manage employees. Across the universities, the dominant types of interventions were strategies to: enhance training, career development and promotional opportunities for staff; improve remuneration and recognition practices; improve employees' work-life balance; and to enhance the fairness of organisational policies and procedures.

With regard to enhancing the fairness and justice of organisational procedures, all five universities reviewed the fairness and openness of promotion procedures for academic staff; and four of the universities implemented or reviewed grievance procedures and systems to manage staff performance, and increase the transparency of performance appraisal systems. Given that strategies to enhance perceived procedural justice featured prominently at all five universities, it is not surprising that there were heightened levels of perceived procedural justice at all universities. HR strategies also focussed on increasing trust in senior management as the majority of universities developed leadership capabilities in staff, reviewed the selection of staff for leadership positions, and implemented or reviewed training and mentoring of staff for leadership positions. It appears that the targeted strategies employed by HR management to build trust in senior management may have been associated with the higher levels of employees' trust in senior management at the majority of the universities. As no specific details of targeted strategies to reduce psychological strain, or increase job satisfaction and organisational commitment were reported by HR management, no conclusions can be drawn in regard to strain, job satisfaction and commitment.

The study identified several university-specific HR initiatives. Firstly, three universities implemented leadership development and management skills programs to enhance the capacity of leaders, particularly Heads of Departments, to manage employees. It is noted that employees at those universities heightened their levels of perceived procedural justice, commitment to the organisation, and trust in senior management. Secondly, one university implemented a university-wide strategy for the early intervention and management of stress claims in order to increase an

awareness of the resources available to staff (and supervisors) and to assist in the early identification and reporting of stress and stress situations. Employees at that university reported the lowest level of psychological strain among the five universities in 2003. Thirdly, another university implemented a university wide restructuring of academic portfolios to streamline systems and administration processes within the university. It appears that the university-wide restructuring may have impacted negatively on employees' levels of strain and work attitudes at the time of the second AUSS survey, as those employees reported higher levels of psychological strain, and lower levels of job satisfaction, organisational commitment, and trust in senior management.

A notable finding was that each of the five universities implemented numerous multi-level stress intervention strategies targeted at the individual, organisational, and individual-organisation interface level. Indeed, the total number of HR interventions implemented at each university during this period ranged from 37–51 strategies, which suggests a targeted focus by all five universities to improve university work environments.

### *12.2.5 Study 5*

Study 5 extended Study 4, by focusing specifically on employee-level perceptions of the effective stress reduction strategies at the aforementioned five universities. Thematic analyses were undertaken on 272 statements from 181 employees who reported reductions in stress. This analysis was interpreted according to the JD-R theoretical model of occupational stress (Bakker & Demerouti, 2007; Demerouti et al., 2001) which provided a conceptual basis from which to explore the potential of additional or increased organisational resources to reduce job demands and stressors in work environments. The stress reduction strategies were viewed in terms of reduced job demands, job resources, and personal resources. Twelve discrete categories were identified: (1) changed job or work role; (2) specific organisational intervention strategies; (3) increased personal resources of positive or protective coping strategies; (4) increased staff or resources and/or systems; (5) new Head of Department or supervisor or management; (6) improved colleague relationships and/or support; (7) increased success, recognition or promotion; (8) reduced working hours and/or status; (9) greater role clarity; (10) increased job security; (11) improved

physical and work environmental characteristics; and (12) improved communication processes.

Improved interpersonal relationships and increased support from supervisors and colleagues at work were reported most frequently by employees as a source of reduced stress. Other dominant themes of effective stress-reduction strategies were either self- or employer-initated changes in job or work role; the use of specific stress-reduction and/or management intervention strategies; the activation of personal resources in terms of coping strategies or attitudes; and increases in staff numbers and/or resources or systems. A total of 234 statements referred specifically to positive changes in the employee's psychosocial work environment, and employees perceived that a combination of individual, organisational, and individual/organisation interface level strategies were related to reductions in stress. Given that 181 employees referred to positive changes, this suggests that there may be a relationship between employees' perceptions of effective stress-reduction strategies and the HR intervention strategies that were implemented by management at the universities that participated in Study 4.

### *12.2.6 Study 6*

Study 6 extended Study 5, and reported on the results of a cross-sectional study of employee perceptions of effective stress reduction strategies at 13 universities to determine whether the types of stress-reduction strategies identified in Study 5 were generalisable to the broader university context. Study 6 showed support for the results identified in Study 5, as thematic analyses of the 683 statements referring to reductions in stress categorised the intervention strategies into similar categories. The single new category to emerge was a reduction in student numbers. The 13 categories were: (1) changed job or work role; (2) new Head of Department or supervisor or management; (3) specific organisational intervention strategies; (4) increased personal resources of positive or protective coping strategies; (5) increased staff or resources and/or systems; (6) improved colleague relationships and/or support; (7) greater role clarity; (8) increased success, recognition or promotion; (9) reduced working hours and/or employment status; (10) improved physical and work environmental characteristics; (11) increased job security; (12) improved communication processes; and (13) reduced student numbers.

Similar to Study 5, the key theme that emerged from the data was that a change in job or work role was reported most frequently as a source of reduced stress. However, unlike Study 5, the next key theme that emerged for 11% of the respondents was that management or supervisory changes, particularly the appointment of new Heads of Departments was associated with reduced levels of stress. This suggests that there were numerous staffing changes in supervisory and middle management positions across the universities between 2000 and 2003/04. Hence, a key finding was that supportive interpersonal relationships, particularly between employees and their supervisor or Head of Department, appear to be a salient feature for university employees in terms of improving their health and well-being by a reduction in stress.

The other dominant themes were consistent with Study 5 as employees reported specific organisational intervention strategies; increases in personal resources in terms of coping strategies and attitudes; and increases in staff or resources and/or systems as contributing to perceptions of reduced stress in the workplace.

## 12.3 Project Limitations

A number of limitations to the present project have been discussed within each of the three presented papers, thus only a summary of points referred to about those three studies will be given.

A limitation to each of the six studies was that psychosocial work factors and well-being of employees were measured by self-report. A further limitation to both Study 1 and 2 was that the measure of POS was based on a single item, thus the reliability of the measure could not be established. However, as pointed out in Chapter 6, the empirical comparison of single-item versus multiple-item measurement scales by Gardner et al. (1998) did not find either method empirically better than the other. Hence, the single-item measure used in Studies 1 and 2 may have captured an important aspect of POS in terms of employee awareness of stress-reduction strategies in organisations, and warrants further investigation in organisational settings.

A limitation to Study 4 is that the results are suggestive as it is not possible to conclude which HR strategies were effective in improving employee well-being and/or morale (i.e., trust in senior management, organisational commitment,

perceived procedural justice), as the degree of exposure to the strategies by the AUSS respondents is not known.

With regard to the qualitative research undertaken in Studies 5 and 6, longitudinal data were not accessed for these two studies as there were limited responses to the measure referring to any perceived changes in employees' stress levels. Nevertheless, the rich and comprehensive cross-sectional research design of Study 5 captured self-reports of reduced stress levels and the strategies or actions that led to reduced stress for employees at five universities. Indeed, Study 6 showed that those findings were generalisable to the broader university population.

## 12.4 Theoretical Implications

The key theoretical implication arising from the examination of POS in both Studies 1 and 2 was that awareness of stress interventions in and of itself, was predictive of beneficial employee outcomes. This is confirmation that the social-exchange theoretical framework can explain how employees' levels of well-being and positive work-related attitudes are promoted by POS. Within the social-exchange process, there is a reciprocal tendency for individuals to respond positively to the valued resources that they receive from others. One way that employees evaluate how they are treated by the organisation is in terms of the provision of organisational practices, such as the implementation of stress interventions. Thus, employees who felt valued and believed that the organisation supported them by implementing strategies to reduce stress, may have increased their trust in senior management or perceived the organisation's policies and practices as fair. In return, employees may have responded with greater organisational commitment and job satisfaction, or a reduced level of psychological strain.

Psychosocial theories of fairness and justice are also relevant to understanding work stress (Peiró, 2008) and the results of Study 3 support the use of the JD-R theoretical framework (Bakker & Demerouti, 2007; Demerouti et al., 2001). As the model encompasses characteristics of the work environment that can contribute to job strain or conversely, to improve well-being and work-related attitudes, Study 3 highlighted the importance of workplace factors such as employee job satisfaction and trust in senior management in the inter-relationships with perceived procedural justice for university employees.

Study 4 showed that multiple HR intervention strategies were implemented by management at the five universities that were designed to reduce stress and enhance employee well-being and morale. With regard to the premise of the JD-R theoretical model, increased resources (i.e., management strategies to reduce and/or manage stress and build employee morale) may buffer the relationship between job demands and stress reactions such as exhaustion, as employees who have high levels of resources available to them are more capable of dealing with demanding work conditions and consequently experience lower levels of exhaustion (Bakker, Demerouti, Taris, et al., 2003). As Study 4 showed that multiple HR intervention strategies were implemented by management, it can be speculated that those increased or additional resources may have assisted employees to achieve work goals and/or reduce job demands.

The motivational hypothesis of the JD-R model was supported in Studies 5 and 6 as job resources such as stress management or reduction interventions appear to have played a role in employees' self-reports of reduced stress. For example, strategies may have played extrinsic motivational roles in helping employees to achieve work goals and reduce job demands (i.e., increased job security, improved management supervision, increased performance feedback). Further, intervention strategies may also have played intrinsic motivational roles in assisting to achieve work goals and reduce job demands (i.e., increased recognition, greater role clarity).

Further evidence of the intrinsic motivating role of job resources was demonstrated by employees' reports that interpersonal relationships reduced their stress. Employees' stated that interpersonal and social relationships provided support and motivated and stimulated them which is in line with the view by Bakker et al. (2007) that job resources such as supportive interpersonal and social relations assist employees to achieve work goals and reduce job demands, and foster a sense of achievement and competence which in turn, stimulates personal growth and development. Further, employees' reports of reduced stress as a result of supportive interpersonal relationships in the workplace between employees and their colleagues, and between employees and their Head of Department specifically, is consistent with the social support component of the Demand-Control-Support (DCS) model of work stress (Johnson & Hall, 1988; Karasek & Theorell, 1990).

In addition, Studies 5 and 6 support recent research by Xanthopoulou et al. (2007) on the role of personal resources in the JD-R model as employees reported being able to activate their personal resources in order to cope with stress and reduce its effects, as they reported an improved positive outlook, increased self-esteem, and greater confidence in their ability to manage stress. In sum, Studies 4–6 in particular, highlighted the importance of work stress theories in examining stress interventions in university settings.

## 12.5 Practical Implications and Future Research

As awareness of stress interventions is predictive of positive employee outcomes., one possible implication is that organisations should also focus on communicating awareness of the HR strategies as well as putting them in place, particularly as a robust HR system has salient HR practices that are communicated strongly to employees (Ostroff & Bowen, 2000). Of particular note, is that awareness of stress interventions was related to trust in senior management and perceived procedural justice. Indeed, it can be speculated that employee awareness of the interventions, regardless of their content makes a positive difference for employees, and in turn, the organisation. The results suggest a need for research to explore the employee experience of HR management practices (Boselie, Dietz, & Boon, 2005) in order to answer the ensuing question of whether it is just awareness of the interventions, or does actual use make a difference?

The results of Studies 1 and 2 take a step in advancing the understanding of positive employee-level outcomes, and their strength lies in the multi-wave sampling which enabled analyses of employee well-being and attitudes across two time-points. The findings of Study 2 have implications for organisations in general, and university management in particular, as they identify potential target groups or areas for the promotion of stress-reduction strategies. The results suggest that university management may need to implement new strategies and/or promote existing stress-management and/or reduction strategies to specific targets groups such as academic employees, and employees who are either new to the university or those who have been working for the organisation for longer periods of time, to ensure that they are aware of organisational strategies to promote employee well-being and morale within their work environment.

The focus on the ethical aspects of procedural justice, psychological contracts, and the normative moral principles of autonomy, equality, and respect for individuals within employment relationships in Study 3 adds to research on applied business ethics. Strategies for enhancing employee perceptions of procedural justice may involve greater transparency and employee voice and involvement in their implementation, and clearer communication of the procedures to employees. Direct approaches to enhancing employee trust in senior management may involve implementing leadership training, development, and mentoring programs (such as those documented in Study 4) and also enhancing communication processes. It would be of value for further research to examine the impact(s) of strategies to enhance trust in management in other organisational contexts, to determine whether the results are widespread in other work settings.

The results of Studies 4-6 suggest that universities and other organisations in general can attain favourable outcomes if targeted resources, such as HR interventions, are implemented and promoted to employees. However, more evaluative research on stress interventions is needed to assist senior management, both in universities and other organisations, to address issues relating to work stressors and refine current strategies or implement new targeted strategies to promote employee well-being in work environments. Indeed, the findings of Studies 5 and 6 clarify and provide important practical insight into the specific factors and processes that employees perceive to reduce stress, and provide an insight into the role of social support in the employee-employer relationship. In university settings, supportive interpersonal relationships with supervisors, specifically Heads of Departments, and colleagues appear to be a salient factor in reducing stress and enhancing employee well-being.

Importantly, the results of all six studies allow for generalisation beyond a specific company or profession as the majority of the sample in each study were non-academic employees who worked in professional, clerical or administrative, technical and service roles. Consequently, the results of this project may inform organisational policy on improving employee health and well-being. In conclusion, the findings of all six studies within this thesis point to the importance of organisational stress intervention strategies in enhancing the health and positive work attitudes of employees in the higher education university sector in Australia.

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# Appendix A:
# Study 4 – Letter of Introduction to University Vice-Chancellors

22 October 2007

Name
Vice-Chancellor
University
Address
STATE

Dear

**Australian University Staff Stress Survey**

In 2000 and 2003, your university took part in an ARC/SPIRT-funded nationwide longitudinal study of occupational stress in Australian university staff. I would like to thank you for your valuable assistance with these phases of the study.

The Australian University Staff Stress Survey commenced in 2000 in order to investigate current levels of stress and well-being in staff at 17 universities. A copy of the report *Occupational Stress in Australian Universities: A National Survey*, together with a summary of the individual findings for your university was forwarded to your office. As a result of the survey, the research team made recommendations to assist these universities to introduce interventions to enhance staff well-being and morale. In 2003/04, 13 of the 17 universities that took part in the 2000 survey were resurveyed.

All of the participating universities showed improvements on some of the measures. As you know from the report we sent you, your university's results in 2003 compared with its results in 2000 showed an overall improvement in staff morale among general staff, including increases in satisfaction with university management, and higher levels of organisational commitment, trust in senior management, and perceived procedural fairness.

The next stage of the research involves trying to identify what steps were taken at each university that might have been responsible for the observed improvements. We hope to do this by interviewing a senior member of the administration, nominated by you, who is best able to provide the information. For example, in 2003, (Name), (Title), liaised with a member of the research team. As in the past, we will ensure complete confidentiality. We believe that the results will be potentially valuable to all the participating universities in enabling them to gain insights into which procedures are most effective in improving staff morale.

Initially, your representative will be asked to comment on a draft questionnaire intended for completion by members of your senior management team. This questionnaire seeks to identify all interventions that were taken between 2000 and 2003, as well as any others taken since then, designed to improve staff morale and reduce work stress. When the results of the questionnaire have been analysed, they will be sent to your representative and an interview will be arranged in order to provide additional insights. Once this information has been gathered from all universities, we will circulate a report to them all containing our conclusion and recommendations which we believe will help them to understand what interventions are most effective for improving morale in their staff.

Finally, we hope to conduct a third anonymous electronic survey of all staff in 2009 that will provide information about which improvements have persisted, as well as allowing us to make causal inferences that are only possible from a longitudinal study with more than two waves of data collection.

I hope that your university will continue to take part in this important research. Accordingly, I would be grateful if you would nominate on the enclosed form a representative to liaise with us during the project. Please return the form to us in the reply-paid envelope by 19 November 2007.

If you would like further information, please contact me at, Tony.Winefield@unisa.edu.au.

Yours sincerely

Professor Anthony H. Winefield, PhD
Chief Investigator
Tel. No. (08) 8302 2156
Fax No. (08) 8302 2956
Email tony.winefield@unisa.edu.au

*Encl.* 2

**Australian University Staff Stress Survey - 2007**

Please complete the details below, and return to: Professor A. H. Winefield, Centre for Applied Psychology, University of South Australia, GPO Box 2471, ADELAIDE, SA, 5001, by 19 November 2007.
(A reply-paid envelope is attached.)

The name, position title, and contact details of a representative from (Name of University) is:

Name: _____

Position Title: _____

Contact details: Email_____

Telephone_____

Authorised by: _____

Position: _____

Signature: _____ Date: _____

# Appendix B:
# Study 4 – Covering Letter to Nominated Human Resource Managers

16 November 2007

Name
Job Title
University
STATE

Dear

**Australian University Staff Stress Survey:**
**Effect of interventions on staff well-being, morale and work attitudes**

Thank you for your ongoing interest and willingness to assist in this research project.

This phase of the Australian University Staff Stress Survey involves evaluating the strategies implemented by the universities in order to improve working conditions and increase staff morale.
My PhD student, Silvia Pignata, is currently working on a project that aims to evaluate those strategies.

You will shortly receive a draft questionnaire which seeks to identify the particular steps that were taken at your university between 2000 and 2003, as well as any others taken since then. We are particularly interested in your opinion of the content of the questionnaire, especially the suitability and the relevance of the questions and the response options.

Please do not hesitate to contact either me, Tony.Winefield@unisa.edu.au, my research associate, Carolyn.Boyd@unisa.edu.au or my PhD student, Silvia.Pignata@postgrads.unisa.edu.au if you require any further information.

Thank you again for your support.

Yours sincerely

Professor Anthony H. Winefield, PhD
Chief Investigator
Tel. No. (08) 8302 2156
Fax No. (08) 8302 2956
Email tony.winefield@unisa.edu.au

# Appendix C:
# Study 4 – Intervention Evaluation Survey (IES): Electronic Survey of Human Resource Managers

# Intervention Evaluation Survey

## Effect of interventions on staff well-being, morale and work attitudes

Thank you for your interest in this research project. The purpose of this research is to identify some of the particular steps that were taken at your university to manage occupational stress and improve staff well-being and morale between 2000 and 2003, as well as any others taken since then. The results may provide further insights into the development and expansion of intervention strategies to enhance employee well-being within universities.

Participation in the study is voluntary and participants are free to withdraw from the research project at any stage without affecting their status, now or in the future. All the information that you provide in the questionnaire will be kept strictly confidential and will be used strictly for research purposes only. The researcher will take every care to remove responses from any identifying material as early as possible. Likewise individuals' responses will be kept confidential by the researcher and not be identified in the reporting of the research. However the researcher cannot guarantee the confidentiality or anonymity of material transferred by email or the internet. Information obtained from this study will be used in a doctoral thesis, journal publications and conference presentations but individual universities or staff members will not be identified. I am also happy to provide you with comprehensive feedback on the results of the study.

All records containing personal information will remain confidential and no information which could lead to identification of any individual will be released. This project has been approved by the University of South Australia's Human Research Ethics Committee. If you have any ethical concerns about the project or questions about your rights as a participant please contact the Executive Officer of this Committee, Tel: +61 8 8302 3118; Email: Vicki.allen@unisa.edu.au. In accordance with ethics requirements your responses to the survey will be stored in paper and CDRom form in a locked cabinet within secure rooms at the Centre for Applied Psychological Research, at the City East campus of the University of South Australia for 7 years.

If you have any queries or require further information, please contact me on (08) 8302 1077 or email at silvia.pignata@postgrads.unisa.edu.au. My supervisors, Professor Tony Winefield and Dr Carolyn Boyd of the School of Psychology at the University of South Australia can be contacted on (08) 8302 2156 or (08) 8302 1077 respectively, during office hours or by email at tony.winefield@unisa.edu.au or at carolyn.boyd@unisa.edu.au.

Thank you again for your time and willingness to participate in this research.

The questionnaire takes approximately 30-40 minutes to complete. Click "Next" to start the survey. If you'd like to leave the survey at any time, click "Next" and then click "Exit this survey" (top right corner) and your answers will be saved. Please click "Done" when you complete the survey.

### 1. Please select the name of your university.

- Murdoch University
- University of Western Australia
- University of South Australia
- University of Adelaide
- University of Melbourne
- RMIT University
- James Cook University
- Swinburne University of Technology
- Deakin University
- University of Technology Sydney
- University of Canberra
- University of Southern Queensland
- Central Queensland University

## Intervention Evaluation Survey

**2. Please answer the following questions about your position and work area.**

| | |
|---|---|
| Position | |
| Area of responsibility | |
| Division/Faculty | |
| Organisational Unit/Section | |

## Intervention Evaluation Survey

### Interventions implemented between 2000 and 2003

**3. Please describe what steps were taken by your university between 2000 and 2003 to reduce stress and/or improve well-being and morale in staff.**

**4. Were any organisational measures implemented at your university between 2000 and 2003 for reasons other than to reduce stress directly, that may have indirectly impacted on staff stress levels? If so, what measures were taken and what was their intended objective/s?**

***For example, measures may have been taken by university management to reduce class sizes in a practical dentistry course in order to enhance each student's level of education and skills but these measures may have also indirectly reduced the stress levels of staff teaching the course.***

## Intervention Evaluation Survey

### Interventions implemented between 2000 and 2003

**5. Which of the following measures were introduced to increase awareness of stress and its management? *Please select all that apply.***

- Established/reviewed Employee Assistance Program
- Promoted Employee Assistance Program to staff
- Implemented/reviewed management-directed training in stress awareness
- Implemented/reviewed staff-directed training in stress management (coping skills)
- Implemented/reviewed Critical Incident Stress Management (CISM) or counselling program
- Implemented/reviewed management-directed training in CISM services
- Established/reviewed media stress awareness program
- Conducted climate/stress survey(s) of staff
- Other (please specify)

**6. Which of the following measures were introduced to enhance job design and reduce job pressure? *Please select all that apply.***

- Increased access to resources (teaching and research) for academic staff
- Increased access to resources for non academic staff
- Increased academic staffing resources
- Increased non academic staffing resources
- Reduced student/staff ratio for academic staff
- Reviewed teaching and research demands for academic staff
- Streamlined administrative procedures
- Streamlined student assessment procedures
- Implemented/reviewed job redesign and classification policies
- Prioritised job responsibilities
- Reviewed job descriptions regularly
- Implemented/reviewed induction and orientation programs for new staff
- Improved physical working environments
- Other (please specify)

# Intervention Evaluation Survey

## Interventions implemented between 2000 and 2003

**7. Which of the following measures were introduced to improve work-life balance in staff? *Please select all that apply.***

- Established/promoted family-friendly provisions
- Established/promoted fractional employment practices
- Established/promoted flexible working hour practices
- Established/promoted rostered day off arrangements
- Established/promoted job sharing practices
- Established/promoted 48/52 weeks per year working arrangements
- Established/promoted work from home agreements
- Specified acceptable workloads and hours
- Monitored absenteeism
- Encouraged staff to take accrued leave
- Other (please specify)

**8. Which of the following measures were introduced to improve communication and consultation with staff? *Please select all that apply.***

- Improved all communication processes from management to staff
- Implemented/reviewed management-directed training in effective communication skills/styles
- Provided regular updates about organisational objectives/vision and targets
- Increased staff consultation and voice in promotion, performance and redundancy procedures
- Increased staff consultation regarding workplace relations
- Increased staff consultation regarding management of organisational change
- Increased employee involvement in organisational practices, e.g., sharing information with management
- Provided positive feedback for good performance
- Other (please specify)

## Intervention Evaluation Survey

### Interventions implemented between 2000 and 2003

**9. Which of the following measures were introduced to address staff concerns regarding tenure (e.g., job insecurity, redundancy and redeployment)? *Please select all that apply.***

- Improved communication processes regarding renewal or non-renewal of staff contracts
- Implemented/reviewed redundancy and redeployment policies
- Established/reviewed vocational counselling for redeployees
- Established/reviewed retraining and outplacement services for redeployees
- Other (please specify)

**10. Which of the following measures were introduced to enhance workplace interpersonal relations? *Please select all that apply.***

- Implemented/reviewed equal opportunity policy
- Implemented/reviewed workplace bullying and violence policy
- Implemented/reviewed discrimination and harassment policy
- Implemented/reviewed conflict identification policy
- Implemented/reviewed mediation and conflict resolution policy
- Implemented/reviewed staff social activities
- Other (please specify)

# Intervention Evaluation Survey

## Interventions implemented between 2000 and 2003

**11. Which of the following measures were introduced to enhance fairness of policies and procedures? *Please select all that apply.***

- Reviewed fairness and openness of recruitment, selection and appointment policies
- Reviewed fairness and openness of promotion procedures for academic staff
- Reviewed fairness and openness of promotion procedures for non academic staff
- Implemented/reviewed policy of internal promotions for non academic staff
- Provided clearly stated promotions criteria and constructive feedback to unsuccessful candidate/s
- Implemented/reviewed grievance procedures
- Implemented/reviewed performance management system
- Increased transparency of performance appraisal procedures
- Reviewed fairness of performance appraisal procedures
- Increased transparency of redundancy procedures
- Reviewed fairness of redundancy procedures
- Other (please specify)

**12. Which of the following measures were introduced to increase staff levels of trust in senior management? *Please select all that apply.***

- Developed leadership capabilities in staff
- Reviewed selection of staff for leadership positions
- Implemented/reviewed training and mentoring of staff for leadership positions
- Reviewed processes for recognising and rewarding good leadership practices
- Increased transparency of management decision making
- Reduced number of reviews and reorganisations
- Finished and implemented reviews before starting new ones
- Implemented/reviewed management reporting timeframes
- Other (please specify)

## Intervention Evaluation Survey

### Interventions implemented between 2000 and 2003

**13. Which of the following measures were introduced to enhance training, career development and promotional opportunities for staff?**
***Please select all that apply.***

- Implemented/reviewed management-directed training in performance management
- Implemented/reviewed management-directed training in change management
- Implemented/reviewed management-directed training in time management
- Implemented/reviewed management-directed training in interpersonal skills
- Implemented/reviewed training for middle management in management skills
- Increased staff training and development opportunities
- Established networking/peer support systems
- Established mentoring/coaching program(s)
- Implemented/reviewed financial support for higher degree study
- Implemented/reviewed assisted leave for higher degree study
- Established/reviewed career paths and succession plans
- Increased career opportunities
- Ensured clear promotion paths for academic staff
- Ensured clear promotion paths for non academic staff
- Developed promotional opportunities
- Other (please specify)

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# Intervention Evaluation Survey

## Interventions implemented between 2000 and 2003

**14. Which of the following measures were introduced to improve remuneration and recognition practices for staff? *Please select all that apply.***

- Initiated pay equity measures
- Implemented/reviewed performance planning and review systems
- Implemented/reviewed staff reward schemes
- Implemented/reviewed performance appraisal with rewards tied to performance
- Developed/improved processes for recognising excellence in teaching
- Developed/improved processes for recognising excellence in research
- Developed/improved processes for recognising excellence in administration
- Vice-Chancellor award(s), letter of congratulations, or similar
- Teaching awards/grants
- Research awards/grants
- Awards for excellence by non academic staff
- Professional development fund/award
- Long Service Awards
- Other (please specify)

**15. Which of the following measures were introduced to improve health and lifestyle in staff? *Please select all that apply.***

- Established/reviewed diet program
- Established/reviewed fitness/exercise program
- Established/reviewed lifestyle program
- Established/reviewed massage program
- Established/reviewed meditation program
- Established/reviewed tai chi program
- Established/reviewed yoga/pilates program
- Other (please specify)

## Intervention Evaluation Survey

### Key Intervention Strategies 2000-2003

This part of the survey relates to the key intervention strategies implemented at your university between 2000 and **2003** and is vital to evaluating the development, implementation and effectiveness of these strategies.

Please select **1-3 key strategies** (any programs, policies or procedures) that best exemplify your university's commitment to improving staff well-being and morale, and answer the following questions.

**16. Please describe the strategy(s) that you have selected.**

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# Intervention Evaluation Survey

## Key Strategies

**17. What was the principal aim(s)?**

**18. On what date(s) was it implemented?**

**19. Is the strategy(s) ongoing? If not, on what date(s) did it cease?**

## Intervention Evaluation Survey

### Key Strategies - continued

**20. What was the extent of its coverage or access?** ***For example, was it introduced across the entire university, or was it targeted towards particular departments or schools?*** **If it was targeted to specific departments or schools, please provide details.**

**21. To which of the following groups was the strategy(s) targeted?** ***Please select one response for each strategy.***

- All staff (including managers)
- Managers only
- Academic staff only
- Non academic staff only
- Both academic and non academic staff
- Casual academic staff
- Casual non academic staff
- Both casual academic and non academic staff
- Other (please specify)

# Intervention Evaluation Survey

## Key Strategies - continued

**22. Please describe how the at-risk groups were identified.**

**23. Which groups were included in planning this strategy(s)? *Please select one response for each strategy.***

- Management only
- Staff only
- Management and staff
- Other (please specify)

**24. Which groups were included in implementing this strategy(s)? *Please select one response for each strategy.***

- Management only
- Staff only
- Management and staff
- Other (please specify)

## Intervention Evaluation Survey

### Interventions implemented since 2003

This part of the survey relates to any intervention strategies implemented at your university **since 2003** in order to improve well-being and morale in staff.

**25. Please describe what steps, if any, have been taken by your university since 2003 to reduce stress and/or improve well-being in staff?**

**26. Have ethical considerations changed since 2003 in regards to implementing certain interventions? If so, what has changed and why? *For example, is there increased recognition of employee rights in matters of work-life balance, or decreased emphasis on treating employees fairly?***

**27. Is there anything else that you'd like to say about your experience with interventions at your university?**

# Appendix D:
# Studies 1–4 – Time 1 Australian University Stress Study (AUSS) Survey Questionnaire

# UNIVERSITY STAFF STRESS QUESTIONNAIRE

August 2000

Dear Colleague,

You are invited to take part in the above research project which is funded by an ARC SPIRT (Strategic Partnership with Industry Research and Training) grant. The industry partner is the National Tertiary Education Union (NTEU) and the research is also being supported financially by the Vice Chancellors of the 17 participating Australian universities.* The purpose of the study is summarised below.

Universities play a vital role in the economic and social life of Australia. They train the nation's scientists, engineers, lawyers, doctors and other professionals and produce much of its cutting-edge research. In order to fulfil this role successfully they need to attract and retain high quality staff and provide a supportive working environment. We aim to examine the current levels of occupational stress in Australian Universities and identify the causes and consequences of occupational stress The main outcome of the project will be to provide valid and sensitive information to assist in the development of organisational strategies designed to identify and minimise occupational stressors, resulting in a psychologically healthier, more efficient, and productive workforce.

The research plan involves surveying all non-casual staff (both academic and general) at the 17 participating universities in August 2000 and again in August 2002. All the information that you provide in this questionnaire will be kept strictly confidential. Only the researchers will see your completed questionnaire. **No one from your university will have access to the information that you provide and it will be used strictly for research purposes only.**

You will be asked to complete a code identifier to enable the researchers to match your responses to this survey, with your responses to the repeat survey in 2002. This is important as it allows the researchers to assess changes in stress within your university over time. The code identifier does not allow us to identify you - your identity will always remain anonymous. The code identifier will only be used to match your responses to the two surveys.

**Please complete all questions**. Incomplete responses cannot be included in the analysis, therefore, your generous cooperation in providing answers to all items in the relevant sections is imperative to the success of this project.

**Please respond to the questions as honestly as you can**. There are no right or wrong answers. Your immediate responses are often the best. Hence, please do not linger on any of the questions for too long. **The questionnaire takes approximately 25 to 30 minutes to complete. If at all possible, please complete the questionnaire within 1 week of receipt.** Once you have completed the questionnaire, please fold and seal immediately in the attached pre-addressed envelope. Place the envelope in your internal mail for return to the researchers.

This research has been approved by the University of South Australia Human Research Ethics Committee.

We hope you will be interested in taking part in this important research project which is aimed to find ways of improving your working conditions by making your job less stressful.

Thank you for your valuable contribution towards this important research. It is greatly appreciated.

Yours Sincerely,

Professor Tony Winefield
UNIVERSITY OF SOUTH AUSTRALIA

Associate/Professor Jagdish Dua
UNIVERSITY OF NEW ENGLAND

Associate/Professor Con Stough
SWINBURNE UNIVERSITY OF TECHNOLOGY

ARC SPIRT NTEU University Staff Stress Questionnaire

*(The 17 participating universities are: Murdoch University, University of Western Australia, University of Adelaide, University of South Australia, University of Melbourne, Royal Melbourne Institute of Technology, Swinburne University, Deakin University, Macquarie University, University of Newcastle, University of Technology Sydney, University of New England, University of Canberra, James Cook University, Queensland University of Technology, University of Southern Queensland, Central Queensland University

Please answer each question on this form using a dark coloured pen, do not use pencil. **You will not be identified by the information you are providing.** **Shade circles like this:** □

## Section A

**I have read and understood the information letter accompanying this questionnaire. O Yes O No**

**A.1** Please circle the name of your university, and write as the campus and postcode, in the table below.

O Murdoch University
O University of Western Australia
O University of Adelaide
O University of South Australia
O University of Melbourne
O Royal Melbourne Institute of Technology
O Swinburne University of Technology
O Deakin University
O Macquarie University
O University of Newcastle
O University of Technology Sydney
O University of New England
O University of Canberra
O James Cook University
O Queensland University of Technology
O University of Southern Queensland
O Central Queensland University

Campus _____ Postcode: ☐☐☐☐

**A. 2** An important aim of this research is to examine changes in stress over time. To enable this, the researchers need to match your responses to this questionnaire with the repeat questionnaire in 2002. To achieve this, please complete the following information below. This information will only be used to match your responses, whilst maintaining your anonymity and the confidentiality of your responses. **Please note these digits cannot be used to identify you.**

In the spaces provided, please write:

**1** The first three letter of you mother's maiden name ☐☐☐

(NB: If you do not know this, write the first three letters of your mother's first name).

**2** The first three letters of your father's first name: ☐☐☐

Date of Birth Day ☐☐ Month ☐☐ Year ☐☐

Gender œ male œ female

ARC SPIRT NTEU University Staff Stress Questionnaire

## Section B

**B.1:** Please shade the appropriate circle to indicate your agreement/disagreement with the following statements.

| In my University: | Strongly Disagree | Disagree | Neither Agree or Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. Staff performance is fairly appraised | œ | œ | œ | œ | œ |
| 2. Promotion opportunities are reasonable | œ | œ | œ | œ | œ |
| 3. Promotions procedures are fair | œ | œ | œ | œ | œ |
| 4. Appointments procedures are fair | œ | œ | œ | œ | œ |
| 5. Voluntary redundancy procedures are fair | œ | œ | œ | œ | œ |
| 6. Involuntary redundancy procedures are fair | œ | œ | œ | œ | œ |
| 7. People can communicate and discuss issues openly | œ | œ | œ | œ | œ |
| 8. I have been adequately consulted about changes made within my workplace | œ | œ | œ | œ | œ |

**B.2:** The following relate to your work role. Please indicate what is most true of you by shading the appropriate circle.

| | Definitely True | False | True | Definitely True |
|---|---|---|---|---|
| 1. I don't have time to finish my job. | œ | œ | œ | œ |
| 2. I'm rushed in doing my job. | œ | œ | œ | œ |
| 3. I have a lot of free time on my job. | œ | œ | œ | œ |

## Academic staff only

(General Staff please go to B5)

**B.3:** The following items deal with various aspects of your work within the university. Please show how satisfied or dissatisfied you feel with each of these features of your present job, by shading the appropriate circle.

| | Very Dissatisfied | Moderately Dissatisfied | Not Sure | Moderately Satisfied | Very Satisfied |
|---|---|---|---|---|---|
| 1. Current level of access to resources I require to perform my job well | œ | œ | œ | œ | œ |
| 2. Current level of funding allocations for research | œ | œ | œ | œ | œ |
| 3. Current level of resource allocations for teaching | œ | œ | œ | œ | œ |
| 4. Current level of funding for support services (eg. technical support services, library services etc) | œ | œ | œ | œ | œ |
| 5. Current level of access to professional development opportunities | œ | œ | œ | œ | œ |

**B.4:** The following statements are designed to ascertain your perceptions about the current teaching environment in your university. Please indicate what your perceptions are by circling the appropriate number.

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. The number of students in the classes I teach has increased | œ | œ | œ | œ | œ |
| 2. My number of teaching hours has increased | œ | œ | œ | œ | œ |
| 3. The number of courses I am expected to teach has increased | œ | œ | œ | œ | œ |
| 4. The quality of my teaching has suffered in the recent past | œ | œ | œ | œ | œ |
| 5. I am concerned about the quality of work produced by my students | œ | œ | œ | œ | œ |
| 6. There is an increase in the number of students with English as their second language that I have to teach | œ | œ | œ | œ | œ |
| 7. There is too much pressure on me to perform research | œ | œ | œ | œ | œ |
| 8. I am pressured to attract external research funding | œ | œ | œ | œ | œ |
| 9. I am expected to consider new teaching modalities (e.g., Web-based teaching) | œ | œ | œ | œ | œ |
| 10. Available resources are adequate enough to provide a high quality learning experience for my students | œ | œ | œ | œ | œ |

**B.5:** Please indicate your agreement or disagreement with the following statements by shading the appropriate circle.

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. Few staff have any important responsibilities | oe | oe | oe | oe | oe |
| 2. Staff have a great deal of freedom to do as they like | oe | oe | oe | oe | oe |
| 3. Staff are encouraged to make their own decisions | oe | oe | oe | oe | oe |
| 4. People can use their own initiative to do things | oe | oe | oe | oe | oe |
| 5. Management encourage staff to rely on themselves when a problem arises | oe | oe | oe | oe | oe |
| 6. Staff generally do not try to be unique and different | oe | oe | oe | oe | oe |
| 7. Staff are encouraged to learn things even if they are not directly related to the job | oe | oe | oe | oe | oe |
| 8. Staff function fairly independently of management | oe | oe | oe | oe | oe |
| 9. Management meet with staff regularly to discuss their future work goals | oe | oe | oe | oe | oe |
| 10. Staff feel free to criticise management publicly | oe | oe | oe | oe | oe |
| 11. Staff morale is high | oe | oe | oe | oe | oe |

**B.6:** The following statements are about your perceptions of your Head of Department or School. If you do not work within a Department or School, please rate the Head of your unit or section, by shading the appropriate circle.

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| **My Head of Department/School/Unit:** | | | | | |
| 1. Can be counted on the be trustworthy | oe | oe | oe | oe | oe |
| 2. Does a good job leading the department/ school/ unit | oe | oe | oe | oe | oe |
| 3. Is concerned about the welfare of the staff | oe | oe | oe | oe | oe |
| 4. Considers staff inputs seriously when making decisions | oe | oe | oe | oe | oe |
| 5. Communicates openly with staff | oe | oe | oe | oe | oe |
| 6. Treats staff fairly | oe | oe | oe | oe | oe |
| 7. Performs his/her job competently | oe | oe | oe | oe | oe |
| 8. Really looks out for what is important for staff | oe | oe | oe | oe | oe |
| 9. Sticks to his/her promises | oe | oe | oe | oe | oe |
| 10. Deals honestly with staff | oe | oe | oe | oe | oe |
| 11. I feel comfortable accepting the Head's influence over issues that are important to me | oe | oe | oe | oe | oe |
| 12. I feel free to discuss work problems and difficulties with my Head without fear of having it used against me later | oe | oe | oe | oe | oe |
| 13. I would be willing to rely on the Head to handle an issue or problem that was important to me | oe | oe | oe | oe | oe |
| 14. If the Head made a decision that seemed to be against the best interest of staff, I would trust that his/her decision was justified by other considerations | oe | oe | oe | oe | oe |
| 15. I would feel a sense of loss if the Head left the Department | oe | oe | oe | oe | oe |
| 16. If I shared my problems with the Head, I know he/she would respond constructively and caringly | oe | oe | oe | oe | oe |
| 17. I identify with the values held by the Head | oe | oe | oe | oe | oe |

**B.7:** The following statements are about your perceptions of your University's Senior Management.

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| **Senior management of my University:** | | | | | |
| 1. Can be counted on as trustworthy | œ | œ | œ | œ | œ |
| 2. Do a good job leading the University | œ | œ | œ | œ | œ |
| 3. Are concerned about the welfare of the staff | œ | œ | œ | œ | œ |
| 4. Consider staff inputs seriously when making decisions | œ | œ | œ | œ | œ |
| 5. Communicates openly with staff | œ | œ | œ | œ | œ |
| 6. Treat staff fairly | œ | œ | œ | œ | œ |
| 7. Stick to their promises | œ | œ | œ | œ | œ |
| 8. Deal honestly with staff | œ | œ | œ | œ | œ |
| 9. If the Head made a decision that seemed to be against the best interest of staff, I would trust that his/her decision was justified by other considerations | œ | œ | œ | œ | œ |
| 10. I identify with the values held by senior management | œ | œ | œ | œ | œ |

**B.8:** Using the following 5 point rating scale, please rate the extent to which you agree with the following statements.

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. I share common goals with my colleagues | œ | œ | œ | œ | œ |
| 1. I share common goals with my Head of School/Unit | œ | œ | œ | œ | œ |
| 1. I share common goals with Senior university management | œ | œ | œ | œ | œ |

**B.9:** Thinking about the future, how likely is it that each of these events might actually occur to you in your current job?

| | Very unlikely | Unlikely | Neither likely nor unlikely | Likely | Very likely |
|---|---|---|---|---|---|
| 1. Lose your job and be laid off (either permanently or for a short while) | œ | œ | œ | œ | œ |
| 2. Be moved to a lower level position? | œ | œ | œ | œ | œ |
| 3. Be moved to a different department or division? | œ | œ | œ | œ | œ |
| 4. Find your department or division's future uncertain? | œ | œ | œ | œ | œ |
| 5. Lose your job by being pressured to accept early retirement? | œ | œ | œ | œ | œ |

**B.10:** Please indicate your level of agreement by filling in the appropriate circle.

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. I am willing to put in a great deal of effort beyond that normally expected in order to help this university be successful | œ | œ | œ | œ | œ |
| 2. I really care about the future of this university | œ | œ | œ | œ | œ |
| 3. I talk about the university as a great organisation to work for | œ | œ | œ | œ | œ |
| 4. I am proud to tell others that I am part of this university | œ | œ | œ | œ | œ |
| 5. My values and this university's values are very similar | œ | œ | œ | œ | œ |
| 6. For me this is the best of all possible organisations for which to work | œ | œ | œ | œ | œ |

**B.11:** Please fill in the circle that best represents how frequently you experience each of the following situations.

| | Never | Frequently | Often | Rarely | Very Frequently |
|---|---|---|---|---|---|
| 1. After work, I come home too tired to do some of the things I'd like to do. | œ | œ | œ | œ | œ |
| 2. On the job I have so much work to do that it takes away from my personal interests. | œ | œ | œ | œ | œ |
| 3. My family dislike how often I am preoccupied with my work while I am at home. | œ | œ | œ | œ | œ |
| 4. My work takes up time that I'd like to spend with family. | œ | œ | œ | œ | œ |
| 5. My job interferes with my responsibilities at home such as garden work, cooking, cleaning, repairs, shopping, paying the bills, or child care. | œ | œ | œ | œ | œ |
| 6. My job or career keeps me from spending the amount of time I would like to spend with my family. | œ | œ | œ | œ | œ |

**B.12:** Please indicate how often you suffer from the following physical symptoms.

| Symptoms: | Never or hardly ever | Rarely | Sometimes | Often | All or nearly all the time |
|---|---|---|---|---|---|
| 1. Headaches | œ | œ | œ | œ | œ |
| 1. Muscle pain | œ | œ | œ | œ | œ |
| 1. Colds/viruses | œ | œ | œ | œ | œ |
| 1. Chest pain or discomfort | œ | œ | œ | œ | œ |
| 1. Sleeping difficulties | œ | œ | œ | œ | œ |
| 1. Back / neck pain | œ | œ | œ | œ | œ |
| 1. Tiredness | œ | œ | œ | œ | œ |
| 1. Skin problems | œ | œ | œ | œ | œ |
| 1. Gastrointestinal problems (e.g., indigestion, Nausea, diarrhoea) | œ | œ | œ | œ | œ |
| 1. Breathing difficulties | œ | œ | œ | œ | œ |
| 1. Feeling dizzy/ lightheadedness | œ | œ | œ | œ | œ |

**B.13:** Please indicate whether you are diagnosed with any of the following medical conditions and if so indicate the severity of the problem

| | No | Mild | Moderate | Severe |
|---|---|---|---|---|
| 1. Coronary Heart Disease | œ | œ | œ | œ |
| 1. Hypertension (High Blood Pressure) | œ | œ | œ | œ |
| 1. Rheumatoid/ Rheumatic/ Osteo-Arthritis | œ | œ | œ | œ |
| 1. Cirrhosis (Liver problems) | œ | œ | œ | œ |
| 1. Asthma/ Allergies | œ | œ | œ | œ |
| 1. Diabetes | œ | œ | œ | œ |
| 1. Thyroid disease | œ | œ | œ | œ |
| 1. Migraine | œ | œ | œ | œ |
| 1. Gastric/ Peptic Ulcers | œ | œ | œ | œ |
| 1. Pruritus (Itching sensation) | œ | œ | œ | œ |

**B.14:** Does your University have an Employee Assistance Program (EAP) for counselling staff?

œ No œ Don't know œ Yes

If so, have you ever used it? œ No œ Yes

If yes, were you counselled internally or externally? œ Internally œ Externally

If so, how helpful was the counselling you received?

œ Not at all œ Not sure œ Moderately helpful œ Moderately helpful œ Very helpful

ARC SPIRT NTEU University Staff Stress Questionnaire

# Section C

**Please complete all relevant items and follow the instructions given in each section.**

C.1: The following items deal with various aspects of your job. Please show how satisfied or dissatisfied you feel with each of these features of your present job by filling the appropriate circle.

| | Extremely Dis-satisfied | Very Dissatisfied | Moderately Dissatisfied | Not Sure | Moderately Satisfied | Very Satisfied | Extremely Satisfied |
|---|---|---|---|---|---|---|---|
| 1. The physical work conditions | œ | œ | œ | œ | œ | œ | œ |
| 1. The freedom to choose your own method of working | œ | œ | œ | œ | œ | œ | œ |
| 1. Your fellow workers | œ | œ | œ | œ | œ | œ | œ |
| 1. The recognition you get for good work | œ | œ | œ | œ | œ | œ | œ |
| 1. Your immediate boss | œ | œ | œ | œ | œ | œ | œ |
| 1. The amount of responsibility you are given | œ | œ | œ | œ | œ | œ | œ |
| 1. Your rate of pay | œ | œ | œ | œ | œ | œ | œ |
| 1. Your opportunity to use your abilities | œ | œ | œ | œ | œ | œ | œ |
| 1. Industrial relations between management and workers in the University | œ | œ | œ | œ | œ | œ | œ |
| 1. Your chance of promotion | œ | œ | œ | œ | œ | œ | œ |
| 1. The way the University is managed | œ | œ | œ | œ | œ | œ | œ |
| 1. The attention paid to suggestions you make | œ | œ | œ | œ | œ | œ | œ |
| 1. Your hours of work | œ | œ | œ | œ | œ | œ | œ |
| 1. The amount of variety in your job | œ | œ | œ | œ | œ | œ | œ |
| 1. Your job security | œ | œ | œ | œ | œ | œ | œ |
| 1. Now, taking everything into consideration, how do you feel about your job as a whole? | œ | œ | œ | œ | œ | œ | œ |

C.2: Please indicate your agreement/disagreement with each of the following statements by shading the appropriate circle.

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. The major satisfaction in my life comes from my job. | œ | œ | œ | œ | œ |
| 2. The most important things that happen to me involve my work. | œ | œ | œ | œ | œ |
| 3. I'm really a perfectionist about my work. | œ | œ | œ | œ | œ |
| 4. I live, eat and breathe my job. | œ | œ | œ | œ | œ |
| 5. I am very involved personally in my work | œ | œ | œ | œ | œ |
| 6. Most things in life are more important than work | œ | œ | œ | œ | œ |

C.3: In this section we are interested in how you have felt over the past **TWO weeks** (not just at work). Please shade a circle for each question.

**Have you recently:**

1. been able to concentrate on whatever you're doing?
   - œ better than usual
   - œ same as usual
   - œ worse than usual
   - œ much less than usual

2. lost much sleep over worry?
   - œ not at all
   - œ no more than usual
   - œ rather more than usual
   - œ much more than usual

3. felt that you are playing a useful part in things?
   - œ more than usual
   - œ same as usual
   - œ less so than usual
   - œ much less than usual

| | | |
|---|---|---|
| 4 | felt capable of making decisions about things? | œ more than usual<br>œ same as usual<br>œ less so than usual<br>œ much less capable |
| 5 | felt constantly under strain? | œ not at all<br>œ no more than usual<br>œ rather more than usual<br>œ much more than usual |
| 6 | felt that you couldn't overcome your difficulties? | œ not at all<br>œ no more than usual<br>œ rather more than usual<br>œ much more than usual |
| 7 | been able to enjoy your normal day-to-day activities? | œ more so than usual<br>œ same as usual<br>œ less so than usual<br>œ much less than usual |
| 8 | been able to face up to your problems? | œ more so than usual<br>œ same as usual<br>œ less so than usual<br>œ much less than usual |
| 9 | been feeling unhappy and depressed? | œ not at all<br>œ no more than usual<br>œ rather more than usual<br>œ much more than usual |
| 10 | been losing confidence in yourself? | œ not at all<br>œ no more than usual<br>œ rather more than usual<br>œ much more than usual |
| 11 | been thinking of yourself as a worthless person? | œ not at all<br>œ no more than usual<br>œ rather more than usual<br>œ much more than usual |
| 12 | recently been feeling reasonably happy, all things considered? | œ more so than usual<br>œ same as usual<br>œ less so than usual<br>œ much less than usual |

**C.4:** In the **last three months** how often have the following people gone out of their way to directly support you in a positive manner (eg., listened to you, provided information, feedback, and advice, gave encouragement, provided empathy, love and acceptance, provided assistance and support, etc.) to make your work and personal life less stressful, easier, and more satisfying.

| | Never | Rarely | Sometimes | Often | Always |
|---|---|---|---|---|---|
| 1. Immediate boss or supervisor | œ | œ | œ | œ | œ |
| 2. Other people at work | œ | œ | œ | œ | œ |
| 3. Spouse, lover, or significant other | œ | œ | œ | œ | œ |
| 4. Family members/Relatives | œ | œ | œ | œ | œ |
| 5. Friends/Neighbours/Community members | œ | œ | œ | œ | œ |

In the **last three months**, overall, how satisfied have you been with the following people in providing you with the social support you wanted and needed both at work and at home?

| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Extremely Satisfied |
|---|---|---|---|---|---|
| 1. Immediate boss or supervisor | œ | œ | œ | œ | œ |
| 2. Other people at work | œ | œ | œ | œ | œ |
| 3. Spouse, lover, or significant other | œ | œ | œ | œ | œ |
| 4. Family members/Relatives | œ | œ | œ | œ | œ |
| 5. Friends/Neighbours/Community members | œ | œ | œ | œ | œ |

C.5: Below is a list of common beliefs people hold. How strongly would you have agreed or disagreed with each statement over the last three months? Please shade the appropriate circle to indicate your response.

| | | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| 1 | Most of life is wasted in meaningless activity | œ | œ | œ | œ | œ |
| 2 | I often feel awkward, uncomfortable, or insecure interacting with others socially | œ | œ | œ | œ | œ |
| 3 | I rarely find myself saying out loud or thinking that I'm not good enough or capable of accomplishing something | œ | œ | œ | œ | œ |
| 4 | I am committed to my job or other activities that I am involved in | œ | œ | œ | œ | œ |
| 5 | I tend to view most work and life changes, disappointments, and setbacks as threatening, harmful, or stressful rather than challenging | œ | œ | œ | œ | œ |
| 6 | Just for variety's sake, I often explore new and different routes to places that I travel to regularly (e.g. home, work) | œ | œ | œ | œ | œ |
| 7 | Others will act according to their own self-interests no matter what I attempt to say or do to influence them | œ | œ | œ | œ | œ |
| 8 | If I get a chance to see how others have done something or get the opportunity to be taught what to do, I am confident that I can be successful at almost anything | œ | œ | œ | œ | œ |
| 9 | I expect some things to go wrong now and then, but there is little doubt in my mind that I can cope with just about anything that comes my way | œ | œ | œ | œ | œ |
| 10 | Overall, most of the things that I am involved in (eg, work, social relationships) are not very stimulating, enjoyable, and rewarding. | œ | œ | œ | œ | œ |
| 11 | I am likely to get frustrated and upset if my plans do not work out as I hoped, or if things do not happen the way I really want them to | œ | œ | œ | œ | œ |
| 12 | There is a direct relationship between how hard I work and the success and respect that I will have | œ | œ | œ | œ | œ |
| 13 | I don't feel that I have accomplished much lately that is really important or meaningful with respect to my future goals and objectives in life | œ | œ | œ | œ | œ |
| 14 | I often think that I am not as good as or less important than others with whom I work or whom I know | œ | œ | œ | œ | œ |
| 15 | Many times I feel that I have little or no control and influence over things that happen to me | œ | œ | œ | œ | œ |
| 16 | If anything else changes or goes wrong in my life right now, I feel that I might not be able to cope with it | œ | œ | œ | œ | œ |
| 17 | When change occurs at work or home I often find myself thinking that the worst is going to happen | œ | œ | œ | œ | œ |
| 18 | At the moment, things at work and at home are fairly predictable and any more changes would just be too much to handle | œ | œ | œ | œ | œ |
| 19 | You can't really trust that many people because most people are looking for ways to improve their welfare and happiness at your expense | œ | œ | œ | œ | œ |
| 20 | Most of the meaning of life comes from internal, rather than external, definitions of success, achievement, and self-satisfaction | œ | œ | œ | œ | œ |

**C.6:** Although each problem we experience may be handled differently, most of us have our own ways of dealing with them on a day-to-day basis. Below is a list of common ways of coping with daily stressors, irritants, annoyances, and challenges. Please shade the appropriate circle to indicate how often you tend to use these techniques and approaches in generally coping with the problems you encounter in your work and personal life:

| | | Never | Rarely | Sometimes | Often | Always |
|---|---|---|---|---|---|---|
| 1 | Talk with others and ask for their opinion, advice, recommendations, ideas, or suggestions. | œ | œ | œ | œ | œ |
| 2 | Blame, criticize, and "put myself down" for somehow creating or causing my problem. | œ | œ | œ | œ | œ |
| 3 | Ask others to modify or change their behaviour to make things better for me. | œ | œ | œ | œ | œ |
| 4 | Dwell on what I should have done or not done in a particular situation. | œ | œ | œ | œ | œ |
| 5 | Change the situation or modify my own behaviour to minimise or alleviate my frustration and dissatisfaction. | œ | œ | œ | œ | œ |
| 6 | Think about and focus on the very worst thing that could happen in a particular situation. | œ | œ | œ | œ | œ |
| 7 | Draw on my past experiences and figure out the best way to solve the problem or improve the situation in a productive and effective manner. | œ | œ | œ | œ | œ |
| 8 | Talk about it and bring it up with others excessively (i.e., "beating a dead horse"). | œ | œ | œ | œ | œ |
| 9 | Develop an action plan and implement it to cope more effectively with the situation in the future. | œ | œ | œ | œ | œ |
| 10 | Think about it constantly during the day and night (i.e., not being able to "let go" and avoid dwelling on what is bothering me). | œ | œ | œ | œ | œ |

**C.7** Please circle a number 1-5 next to each of the following items, to indicate your level of agreement with each statement.

| | | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| 1. | I am not a worrier. | œ | œ | œ | œ | œ |
| 2. | I like to have a lot of people around me. | œ | œ | œ | œ | œ |
| 3. | I try to be courteous to everyone I meet. | œ | œ | œ | œ | œ |
| 4. | I keep my belongings clean and neat. | œ | œ | œ | œ | œ |
| 5. | I often feel inferior to others. | œ | œ | œ | œ | œ |
| 6. | I laugh easily. | œ | œ | œ | œ | œ |
| 7. | I often get into arguments with my family and co-workers. | œ | œ | œ | œ | œ |
| 8. | I'm pretty good about pacing myself so as to get things done on time. | œ | œ | œ | œ | œ |
| 9. | When I'm under a great deal of stress, sometimes I feel like I'm going to pieces. | œ | œ | œ | œ | œ |
| 10. | I don't consider myself especially "light hearted". | œ | œ | œ | œ | œ |
| 11. | Some people think I'm selfish and egotistical. | œ | œ | œ | œ | œ |
| 12. | I am not a very methodical person. | œ | œ | œ | œ | œ |
| 13. | I rarely feel lonely or blue. | œ | œ | œ | œ | œ |
| 14. | I really enjoy talking to people. | œ | œ | œ | œ | œ |
| 15. | I would rather cooperate with others than compete with them. | œ | œ | œ | œ | œ |
| 16. | I try to perform all the tasks assigned to me conscientiously. | œ | œ | œ | œ | œ |
| 17. | I often feel tense and jittery. | œ | œ | œ | œ | œ |
| 18. | I like to be where the action is. | œ | œ | œ | œ | œ |
| 19. | I tend to be cynical and sceptical of others' intentions. | œ | œ | œ | œ | œ |

| | | | | | | |
|---|---|---|---|---|---|---|
| 20. | I have a clear set of goals and work toward them in an orderly fashion. | œ | œ | œ | œ | œ |
| 21. | Sometimes I feel completely worthless. | œ | œ | œ | œ | œ |
| 22. | I usually prefer to do things alone. | œ | œ | œ | œ | œ |
| 23. | I believe that most people will take advantage of you if you let them. | œ | œ | œ | œ | œ |
| 24. | I waste a lot of time before settling down to work. | œ | œ | œ | œ | œ |
| 25. | I rarely feel fearful or anxious. | œ | œ | œ | œ | œ |
| 26. | I often feel as if I'm bursting with energy. | œ | œ | œ | œ | œ |
| 27. | Most people I know like me. | œ | œ | œ | œ | œ |
| 28. | I work hard to accomplish my goals. | œ | œ | œ | œ | œ |
| 29. | I often get angry at the way people treat me. | œ | œ | œ | œ | œ |
| 30. | I am a cheerful, high-spirited person. | œ | œ | œ | œ | œ |
| 31. | Some people think of me as cold and calculating. | œ | œ | œ | œ | œ |
| 32. | When I make a commitment, I can always be counted on to follow through. | œ | œ | œ | œ | œ |
| 33. | Too often, when things go wrong, I get discouraged and feel like giving up. | œ | œ | œ | œ | œ |
| 34. | I am not a cheerful optimist. | œ | œ | œ | œ | œ |
| 35. | I'm hard-headed and tough-minded in my attitudes. | œ | œ | œ | œ | œ |
| 36. | Sometimes I'm not as dependable or reliable as I should be. | œ | œ | œ | œ | œ |
| 37. | I am seldom sad or depressed. | œ | œ | œ | œ | œ |
| 38. | My life is fast-paced. | œ | œ | œ | œ | œ |
| 39. | I generally try to be thoughtful and considerate. | œ | œ | œ | œ | œ |
| 40. | I am a productive person who always gets the job done. | œ | œ | œ | œ | œ |
| 41. | I often feel helpless and want someone else to solve my problems. | œ | œ | œ | œ | œ |
| 42. | I am a very active person. | œ | œ | œ | œ | œ |
| 43. | If I don't like people, I let them know it. | œ | œ | œ | œ | œ |
| 44. | I never seem to be able to get organized. | œ | œ | œ | œ | œ |
| 45. | At times I have been so ashamed I just wanted to hide. | œ | œ | œ | œ | œ |
| 46. | I would rather go my own way than be a leader of others. | œ | œ | œ | œ | œ |
| 47. | If necessary, I am willing to manipulate people to get what I want. | œ | œ | œ | œ | œ |
| 48. | I strive for excellence in everything I do. | œ | œ | œ | œ | œ |

ARC SPIRT NTEU University Staff Stress Questionnaire

# Section D

**D.1:** Living Arrangements

Please indicate your living arrangements

- œ Living alone
- œ Living with partner only
- œ Living with partner and others
- œ Living with one or more people (no partner)

**D.2:** Number of Dependants

Please indicate how many persons are financially dependent on you

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 (or more) |
|---|---|---|---|---|---|---|---|---|---|---|
| œ | œ | œ | œ | œ | œ | œ | œ | œ | œ | œ |

**D.3:** Are you an Indigenous Australian? (an Indigenous Australian is a person of indigenous Australian [e.g., Aboriginal or Torres Straight Islander] descent, who identifies as such and is accepted as such by the community in which he or she lives)

œ Yes œ No

Are you from a non-English speaking background? (people from a non-English background are defined as those who were born overseas, arrived in Australia within the previous ten years and speak a language other than English at home).

œ Yes œ No

**D.4:** Do you have a physical disability or impairment?

œ Yes œ No

**D.5:** Trade Union Membership Please indicate the union(s) you are a member of:

œ None œ NTEU œ CPSU œ ASU œ LHMU œ AWMU œ Other (please specify) [ ]

**D.6:** Have you lodged or been granted a workers compensation claim in the last two years?

œ Yes œ No

**D.7:** What is the status of your employment? œ Full-time œ Part-time

**Is this status** œ Continuing/Permanent œ Fixed term

If you work part-time please indicate your work fraction

œ 0.1 œ 0.2 œ 0.3 œ 0.4 œ 0.5 œ 0.6 œ 0.7 œ 0.8 œ 0.9

**How long have you worked for your current university, in a non-interrupted way?** [ ][ ] **Years**

**D.8:** Hours of Work

We are trying to get a snapshot of a working day, including work done at your workplace and at home. Please respond as accurately as you can, even if the day we ask about is not typical for you.

The last day (before today) that you worked for your employer was a:

œ Monday œ Tuesday œ Wednesday œ Thursday œ Friday œ Saturday œ Sunday

On that day, what time did you first commence work? [ ]

What time did you last cease work? [ ]

Between those times, how many hours (to the nearest quarter hour) did you spend **NOT** working [ ]

(e.g. lunch, dinner)? ☐

**Do you wish to change your formal working hours?**

œ No œ Yes, increase hours œ Yes, decrease hours

## For Academic staff only

How many hours do you work in an average week ☐

How often do you need to work after hours (ie weekends and evenings) to meet deadlines?

œ Never œ Rarely or occasionally œ Once or twice per month œ Once or twice per month œ Most days

## For General Staff Only

During the last full week you worked, how many hours did you work after-hours?

œ 1-2 hrs œ 3-4hrs œ 5-6 hrs œ 7-8 hrs œ 9-10 hrs œ 11-12 hrs œ 13-14 hrs œ >=15 hrs.

For how many of those hours did you or will you receive overtime paid in money?

œ 1-2 hrs œ 3-4hrs œ 5-6 hrs œ 7-8 hrs œ 9-10 hrs œ 11-12 hrs œ 13-14 hrs œ >=15 hrs.

## For All Staff

D.9: Qualifications

From the list below please indicate your highest qualification(s):

œ No formal qualification
œ Trade certificate
œ Business/Secretarial certificate
œ Associate Diploma
œ Doctorate
œ Diploma
œ Degree
œ Graduate Diploma
œ Masters

Please indicate whether you are currently studying for a formal qualification:

œ No œ Yes (if yes, please indicate the type of qualification you are currently undertaking from the list below):

œ Trade certificate
œ Business/Secretarial certificate
œ Associate Diploma
œ Diploma
œ Degree
œ Graduate Diploma
œ Masters
œ Doctorate

**D.10: Please answer the following questions about your work area(s). You will not be identified from this information.**

**Broad Work Unit Area** œ Academic Department œ Research Centre œ Campus Wide Services

**Specific Workplace Area (eg faculty/ academic department)**

**Academic Area**
œ Agriculture
œ Built Environment
œ Business Administration
œ Economics
œ Education
œ Engineering/processing
œ Health Sciences
œ Humanities
œ Law
œ Mathematics/Computing
œ Renewable Resources
œ Sciences
œ Social Sciences/Studies

**Non Academic Area**
œ Central Administration
œ Library
œ Operations Support
œ Student Services

**D.11:** Nature of Work

- œ Academic – Teaching and research
- œ Academic – Teaching only
- œ Academic – Research only
- œ Academic – Head of Department (or equivalent)
- œ Academic – Dean or above
- œ General – Professional (eg accountant, lawyer, counsellor, librarian)
- œ General – Clerical/Administrative
- œ General – Technical
- œ General – Services (eg cleaners, security, hospitality).

## For General staff only

**D.12:** Staff Appointment

Below please indicate the level of your current classification:

œ HEW 1 œ HEW 2 œ HEW 3 œ HEW 4 œ HEW 5 œ HEW 6 œ HEW 7 œ HEW 8 œ HEW 9 œ HEW 10

Other general staff classification (specify) _____

Years in current classification: _____

Below please indicate the level of your first staff appointment, other than as a casual:

œ HEW 1 œ HEW 7
œ HEW 2 œ HEW 8
œ HEW 3 œ HEW 9
œ HEW 4 œ HEW 10
œ HEW 5 œ Other general classification
œ HEW 6 œ Academic classification

## For Academic staff only

**D.13: Staff Appointment**

Below please indicate the level of your current classification:

œ Level A œ Level B œ Level C œ Level D œ Level E œ Other (please specify) _____

Years in current classification: _____

Below please indicate the level of your first academic staff appointment, other than as casual:

œ Level A œ Level B œ Level C œ Level D œ Level E œ Other (please specify) _____

**Are you a principal supervisor of postgraduate research degrees (i.e. Masters by research or PhD degrees)?**

œ No œ Yes

If you answered YES to the above question please indicate the number of postgraduate research degrees you are currently supervising:

œ 1 œ 2 œ 3 œ 4 œ 5-10 œ More than 10

**Do you directly supervise the work of one or more staff?** œ No œ Yes

If you answered YES to the above question please indicate the number of staff whose work you directly supervise):

œ 1 œ 2 œ 3 œ 4 œ 5 œ 6 œ 7 œ 8 œ 9 œ 10 œ 11-15 œ 16-20 œ 21-25 œ 26-30 œ More than 30

**Do you manage or control a work area in which staff for whom you are responsible supervise other staff?**

œ No œ Yes

If you answered YES to the above question please indicate the number of staff whose work you directly supervise):

œ 1 œ 2 œ 3 œ 4 œ 5 œ 6 œ 7 œ 8 œ 9 œ 10 œ 11-15 œ 16-20 œ 21-25 œ 26-30 œ More than 30

**I travel between campuses:** œ No œ Yes

If Yes how inconvenient is it for you

œ Not at all convenient œ Slightly convenient œ Moderately convenient œ Very convenient

**If you have any additional comments please write in the space given below.**

.....

.....

.....

.....

.....

.....

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.....

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.....

**Thank you for your valuable contribution to this important research.**

**Please fold the questionnaire, seal immediately in the attached envelope and place in your internal mail system. This will ensure the confidentially and safe return of your questionnaire to the researchers.**

**Feedback**

**A copy of the final report of the findings of this study can be obtained from the official website for this study: http://www.swin.edu.au/bioscieleceng/neuropsych/stress from March 2001. If there are any concerns about this research that cannot be answered by the Chief Investigator Professor Winefield, you may write to the Chair, University Ethics Committee, Linley Hartmann, University of South Australia, City West Adelaide 5000.**

**A request for volunteers to participate in a clinical trial:**

University staff members from university campuses located in Adelaide and Melbourne are requested to volunteer to participate in a clinical trial designed to examine the physiological/ health related aspects of stress, as an extension of this study. A full information sheet will be given to you before you provide informed consent to participate. The trial examines the relationship between physiological processes, immune system functioning and occupational stress. If you are willing to participate or for further details please contact **Associate Professor Con Stough,** email: cstough@swin.edu.au

# Appendix E:
# Studies 1–6 – Time 2 Australian University Stress Study (AUSS) Online Questionnaire

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**Occupational Stress in Australian Universities:**

**Follow-up Survey - October 2003**

Dear Colleague

You are invited to take part in the second survey of the National Study of Occupational Stress in Australian Universities. This project is funded by the Australian Research Council, the National Tertiary Education Union (NTEU), and the Vice Chancellors of the 17 participating universities.

The first survey, completed in 2000 by nearly 9000 university staff, identified the key sources of job stress in the higher education sector and provided data that enabled the participating universities, the union, and the government to understand how working conditions can be improved[1].

**This second survey is critical for understanding how stress and job satisfaction among university staff have changed since 2000, and evaluating whether interventions put in place at many of the universities have made a difference.**

**All non-casual university staff members are requested to complete this survey**, including staff who did not complete the first survey. **The survey is anonymous and no one from your university will have access to your individual data.** The information you provide will be used strictly for research purposes only. This project has been approved by the University of South Australia Human Research Ethics Committee.

**The survey is conducted on-line and takes approximately 20 minutes to complete. To complete the survey, simply go to** http:/NUSS.websurvey.net.au/. If you prefer to complete a paper copy of the survey, this can be downloaded from the survey website (copies are also available from your NTEU representative). If you have any questions about this survey, please contact Professor Tony Winefield at tony.winefield@unisa.edu.au, telephone 8302 2156.

Thank you for your valuable contribution towards this important research. A report of the findings of this study will be available at: www.unisanet.unisa.edu.au/nuss/NationalUniversityStressStudy.htm from March 2004.

Yours faithfully


Professor Tony Winefield
UNIVERSITY OF SOUTH AUSTRALIA

Professor Con Stough
SWINBURNE UNIVERSITY OF TECHNOLOGY

Nicole Gillespie
MELBOURNE BUSINESS SCHOOL
UNIVERSITY OF MELBOURNE

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**Please answer all questions** by filling in the circle next to the appropriate response, or writing in the required information. **You will not be identified by any of the information you provide.** Remember there are no right or wrong answers, and your immediate response is often the best.

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Not Like This--> ⊗ ✓

## Section A

**A.1:** Please fill in on the circle to the left of the university for which you work.

- ○ Murdoch University
- ○ University of Western Australia
- ○ University of Adelaide
- ○ University of South Australia
- ○ University of Melbourne
- ○ RMIT University
- ○ Swinburne University of Technology
- ○ University of New England
- ○ Queensland University of Technology
- ○ Deakin University
- ○ University of Technology, Sydney
- ○ University of Canberra
- ○ James Cook University
- ○ University of Southern Queensland
- ○ Central Queensland University
- ○ Macquarie University
- ○ University of Newcastle

Please write the name and postcode of the campus at which you work.

Campus

Postcode

**Code identifier.** This information will be used to match your responses with those in the previous survey and in future surveys, whilst maintaining your anonymity. **Please note that this information cannot be used to identify you.** Even if you did not complete the first questionnaire, please provide this information.

In the spaces provided, please write:

**A.2:** The first three letters of your mother's maiden name (If you do not know this, type the first three letters of your mother's first name).

**A.3:** The first three letters of your father's first name

**A.4:** Your Gender

○ Male ○ Female

**A.5:** Your date of birth (ie: 13111960)

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**A.6: Indicate the categories below that best describe your current role.**

| Academic Staff | General staff |
|---|---|
| ○ Teaching and research | ○ Professional (eg accountant, lawyer, counsellor, librarian) |
| ○ Teaching only | ○ Clerical / Administrative |
| ○ Research only | ○ Technical |
| ○ Head of department (or equivalent) | ○ Services (eg cleaners, security, hospitality) |
| ○ Dean or above | ○ Head of Department (or equivalent) |

## Section B

**B.1:** The following statements relate to your Department or School. If you do not work in a Department or School, please answer in relation to your Work Unit.

| **In my Department/School:** (Shade Circles Like This--> ● Not Like This--> ⊗ ✓) | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. Staff performance is fairly appraised | ○ | ○ | ○ | ○ | ○ |
| 2. Promotion opportunities for academic staff are reasonable | ○ | ○ | ○ | ○ | ○ |
| 3. Promotion opportunities for general staff are reasonable | ○ | ○ | ○ | ○ | ○ |
| 4. Promotion procedures are fair | ○ | ○ | ○ | ○ | ○ |
| 5. Appointment procedures are fair | ○ | ○ | ○ | ○ | ○ |
| 6. Voluntary redundancy procedures are fair | ○ | ○ | ○ | ○ | ○ |
| 7. Involuntary redundancy procedures are fair | ○ | ○ | ○ | ○ | ○ |
| 8. Staff can communicate and discuss issues openly | ○ | ○ | ○ | ○ | ○ |
| 9. Staff are adequately consulted about changes made in the workplace | ○ | ○ | ○ | ○ | ○ |

| **B.2: In my Department/School …** | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. Few staff have any important responsibilities | ○ | ○ | ○ | ○ | ○ |
| 2. Staff have a great deal of freedom to do as they like | ○ | ○ | ○ | ○ | ○ |
| 3. Staff are encouraged to make their own decisions | ○ | ○ | ○ | ○ | ○ |
| 4. People can use their own initiative to do things | ○ | ○ | ○ | ○ | ○ |
| 5. Management encourage staff to rely on themselves when a problem arises | ○ | ○ | ○ | ○ | ○ |
| 6. Staff generally do not try to be unique and different | ○ | ○ | ○ | ○ | ○ |
| 7. Staff are encouraged to learn things even if they are not directly related to the job | ○ | ○ | ○ | ○ | ○ |
| 8. Staff function fairly independently of management | ○ | ○ | ○ | ○ | ○ |
| 9. Management meet with staff regularly to discuss their future work goals | ○ | ○ | ○ | ○ | ○ |
| 10. Staff feel free to criticise management publicly | ○ | ○ | ○ | ○ | ○ |
| 11. Staff morale is high | ○ | ○ | ○ | ○ | ○ |

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**B.3:** The following statements are about your perceptions of your Head of Department or School. If you do not work within a Department or School, please rate the Head of your Unit. If you are the Head of your Department/School/Unit, please complete this section in reference to the person to whom you report.

| My Head of Department/School … | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| | ○ | ○ | ○ | ○ | ○ |
| 1. Can be counted on to be trustworthy | ○ | ○ | ○ | ○ | ○ |
| 2. Does a good job leading the department/ school/ unit | ○ | ○ | ○ | ○ | ○ |
| 3. Is concerned about the welfare of the staff | ○ | ○ | ○ | ○ | ○ |
| 4. Considers staff input seriously when making decisions | ○ | ○ | ○ | ○ | ○ |
| 5. Communicates openly with staff | ○ | ○ | ○ | ○ | ○ |
| 6. Treats staff fairly | ○ | ○ | ○ | ○ | ○ |
| 7. Sticks to his/her promises | ○ | ○ | ○ | ○ | ○ |
| 8. Deals honestly with staff | ○ | ○ | ○ | ○ | ○ |

**B.4:** How willing are you to do the following with your **Head of Department/School**? If you are the Head of your Department/ School, please complete this section in reference to the person to whom you report.

| | Not at all willing | | | | | | Completely Willing |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 1. Rely on his/her work-related judgements | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 2. Follow his/her advice on important issues | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 3. Depend on him/her to handle an important issue on your behalf | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 4. Depend on him/her to back you up in difficult situations | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 5. Rely on his/her task-related skills and abilities | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 6. Share your personal feelings | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 7. Confide in him/her about personal issues that are affecting your work | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 8. Discuss work-related problems or difficulties that could potentially be used to disadvantage you | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 9. Share your personal beliefs | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 10. Discuss how you honestly feel about your work, even negative feelings and frustration | ○ | ○ | ○ | ○ | ○ | ○ | ○ |



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**B.5:** The following statements are about your perceptions of your University's Senior Management. Please show how much you agree or disagree with each one.

| Senior Management of my University... | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. Can be counted on to be trustworthy | ○ | ○ | ○ | ○ | ○ |
| 2. Do a good job leading the university | ○ | ○ | ○ | ○ | ○ |
| 3. Are concerned about the welfare of the staff | ○ | ○ | ○ | ○ | ○ |
| 4. Consider staff input seriously when making decisions | ○ | ○ | ○ | ○ | ○ |
| 5. Communicate openly with staff | ○ | ○ | ○ | ○ | ○ |
| 6. Treat staff fairly | ○ | ○ | ○ | ○ | ○ |
| 7. Stick to their promises | ○ | ○ | ○ | ○ | ○ |
| 8. Deal honestly with staff | ○ | ○ | ○ | ○ | ○ |

| **B.6:** The following statements relate to your work role. | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. I don't have time to finish my job. | ○ | ○ | ○ | ○ | ○ |
| 2. I'm rushed in doing my job. | ○ | ○ | ○ | ○ | ○ |
| 3. I have a lot of free time on my job. | ○ | ○ | ○ | ○ | ○ |

| **B.7:** Thinking about the future, how likely is it that each of these events might occur to you in your current job? | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. Lose your job and be laid off | ○ | ○ | ○ | ○ | ○ |
| 2. Find your department or division's future uncertain | ○ | ○ | ○ | ○ | ○ |
| 3. Lose your job by being pressured to accept early retirement | ○ | ○ | ○ | ○ | ○ |

| **B.8:** How do you feel about the university? Please indicate your level of agreement or disagreement with the following statements. | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. I am willing to put in a great deal of effort beyond that normally expected in order to help this university be successful | ○ | ○ | ○ | ○ | ○ |
| 2. I really care about the future of this university. | ○ | ○ | ○ | ○ | ○ |
| 3. I am proud to tell others that I am part of this university. | ○ | ○ | ○ | ○ | ○ |
| 4. My values are very similar to the values of this university. | ○ | ○ | ○ | ○ | ○ |
| 5. For me this is the best of all possible organisations for which to work. | ○ | ○ | ○ | ○ | ○ |

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**B.9:** Please show how often you experience each of the following situations.

| | Never | Rarely | Sometimes | Often | Very Often |
|---|---|---|---|---|---|
| 1. After work, I come home too tired to do some of the things I'd like to do. | ○ | ○ | ○ | ○ | ○ |
| 2. On the job I have so much work to do that it takes away from my personal interests. | ○ | ○ | ○ | ○ | ○ |
| 3. My family/partner dislikes how often I am preoccupied with my work while I am at home. | ○ | ○ | ○ | ○ | ○ |
| 4. My work takes up time that I'd like to spend with family/partner. | ○ | ○ | ○ | ○ | ○ |
| 5. My job interferes with my responsibilities at home such as childcare, cooking, cleaning, garden work, repairs, shopping, or paying the bills. | ○ | ○ | ○ | ○ | ○ |
| 6. My job or career keeps me from spending the amount of time I would like to spend with my family/partner. | ○ | ○ | ○ | ○ | ○ |

**B.10:** Please show how often you suffer from the following physical symptoms

| | Never / hardly ever | Rarely | Sometimes | Often | All / nearly all the time |
|---|---|---|---|---|---|
| 1. Headaches | ○ | ○ | ○ | ○ | ○ |
| 2. Muscle pain | ○ | ○ | ○ | ○ | ○ |
| 3. Colds / viruses | ○ | ○ | ○ | ○ | ○ |
| 4. Chest pain or discomfort | ○ | ○ | ○ | ○ | ○ |
| 5. Sleeping difficulties | ○ | ○ | ○ | ○ | ○ |
| 6. Back / neck pain | ○ | ○ | ○ | ○ | ○ |
| 7. Tiredness | ○ | ○ | ○ | ○ | ○ |
| 8. Gastrointestinal disorders (eg., indigestion, nausea, diarrhoea) | ○ | ○ | ○ | ○ | ○ |
| 9. Breathing difficulties | ○ | ○ | ○ | ○ | ○ |
| 10. Feeling dizzy / light-headed | ○ | ○ | ○ | ○ | ○ |

**B.11:** Please indicate whether you are diagnosed with any of the following medical conditions, and if so, indicate the severity of the problem.

| | No | Mild | Moderate | Severe |
|---|---|---|---|---|
| 1. Coronary heart disease | ○ | ○ | ○ | ○ |
| 2. Hypertension (high blood pressure) | ○ | ○ | ○ | ○ |
| 3. Arthritis | ○ | ○ | ○ | ○ |
| 4. Asthma | ○ | ○ | ○ | ○ |
| 5. Allergies | ○ | ○ | ○ | ○ |
| 6. Diabetes | ○ | ○ | ○ | ○ |
| 7. Migraine | ○ | ○ | ○ | ○ |
| 8. Gastric/ peptic ulcer | ○ | ○ | ○ | ○ |
| 9. Skin disorder (e.g., eczema, psoriasis, shingles) | ○ | ○ | ○ | ○ |

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**B.12:** Do you have any long-term illness, health problem or disability that limits your daily activities or the work you can do? ○ Yes ○ No

**B.13:** Over the past 3 months, roughly how productive have you felt in your job?

| Less than 70% | 70% | 80% | 90% | 100% |
|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ |

**B.14:** Over the last 3 months, how many working days in total have you been off work through illness or injury?

Write in number ☐☐

**B.15:** During the last 3 months, have you not taken sick leave whilst ill and/ or returned to work before you were well due to the pressure of work? ○ Yes ○ No

**B.16.** Does your University have an Employee Assistance Program (EAP) for counselling staff?

○ No ○ Don't know ○ Yes

a) If yes, have you ever used it? ○ No ○ Yes

b) If yes, were you counselled internally or externally? ○ Internally ○ Externally

c) If yes, how helpful was the counselling you received?
- ○ Not at all helpful
- ○ Not sure
- ○ Somewhat helpful
- ○ Moderately helpful
- ○ Very helpful

**Academic staff only** (General Staff please go to Section C)

| **B.17:** The following items ask about the resources available to you at work. Please show how satisfied or dissatisfied you feel with each of these resources. | Very Dissatisfied | Moderately Dissatisfied | Not Sure | Moderately Satisfied | Very Satisfied |
|---|---|---|---|---|---|
| | ○ | ○ | ○ | ○ | ○ |
| 1. Current level of funding allocations for research | ○ | ○ | ○ | ○ | ○ |
| 2. Current level of resource allocations for teaching | ○ | ○ | ○ | ○ | ○ |
| 3. Current level of funding for support services (e.g., technical support services, library services etc) | ○ | ○ | ○ | ○ | ○ |
| 4. Current access to professional development opportunities | ○ | ○ | ○ | ○ | ○ |

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| B.18: The following statements refer to the current teaching and research environment in your university. Please indicate your agreement or disagreement with each one. | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. The number of hours I spend in teaching-related activities has increased in the past 3 years | ○ | ○ | ○ | ○ | ○ |
| 2. The number of courses I am expected to teach is manageable | ○ | ○ | ○ | ○ | ○ |
| 3. The quality of my teaching has declined in the past 3 years | ○ | ○ | ○ | ○ | ○ |
| 4. There is too much pressure on me to perform research | ○ | ○ | ○ | ○ | ○ |
| 5. I do not have time to perform quality research | ○ | ○ | ○ | ○ | ○ |
| 6. The amount of administration I am expected to do is manageable given my other responsibilities | ○ | ○ | ○ | ○ | ○ |

## Section C

| C.1: Please show how satisfied or dissatisfied you feel with each of these features of your present job. | Extremely Dissatisfied | Very Dissatisfied | Moderately Dissatisfied | Not Sure | Moderately Satisfied | Very Satisfied | Extremely Satisfied |
|---|---|---|---|---|---|---|---|
| 1. The physical work conditions | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 2. The freedom to choose your own method of working | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 3. Your fellow workers | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 4. The recognition you get for good work | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 5. Your immediate boss | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 6. The amount of responsibility you are given | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 7. Your rate of pay | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 8. Your opportunity to use your abilities | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 9. Industrial relations between management and workers in the University | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 10. Your chance of promotion | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 11. The way the University is managed | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 12. The attention paid to suggestions you make | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 13. Your hours of work | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 14. The amount of variety in your job | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 15. Your job security | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 16. Now, taking everything into consideration, how do you feel about your job as a whole? | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

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**C.2:** How do you usually feel towards your work? Please indicate your agreement or disagreement with the following statements.

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. The most important things that happen to me involve my work | ○ | ○ | ○ | ○ | ○ |
| 2. I'm really a perfectionist about my work | ○ | ○ | ○ | ○ | ○ |
| 3. I live, eat and breathe my job | ○ | ○ | ○ | ○ | ○ |
| 4. I am very involved personally in my work | ○ | ○ | ○ | ○ | ○ |
| 5. Most things in life are more important than work | ○ | ○ | ○ | ○ | ○ |

**C.3:** In this section we are interested in how you have felt over the past **TWO** weeks (not just at work). It is important that you try to answer every question. Please circle a number for each question. **Have you recently...**

1. Been able to concentrate on what you're doing?
   ○ better than usual ○ same as usual ○ less than usual ○ much less than usual
2. Lost much sleep over worry?
   ○ not at all ○ no more than usual ○ rather more than usual ○ much more than usual
3. Felt that you are playing a useful part in things?
   ○ more so than usual ○ same as usual ○ less so than usual ○ much less than usual
4. Felt capable about making decisions about things?
   ○ more so than usual ○ same as usual ○ less so than usual ○ much less capable
5. Felt constantly under strain?
   ○ not at all ○ no more than usual ○ rather more than usual ○ much more than usual
6. Felt you couldn't overcome your difficulties?
   ○ not at all ○ no more than usual ○ rather more than usual ○ much more than usual
7. Been able to enjoy your normal day-to-day activities?
   ○ more so than usual ○ same as usual ○ less so than usual ○ much less than usual
8. Been able to face up to your problems?
   ○ more so than usual ○ same as usual ○ less able than usual ○ much less able
9. Been feeling unhappy or depressed
   ○ not at all ○ no more than usual ○ rather more than usual ○ much more than usual
10. Been losing confidence in yourself?
    ○ not at all ○ no more than usual ○ rather more than usual ○ much more than usual
11. Been thinking of yourself as a worthless person?
    ○ not at all ○ no more than usual ○ rather more than usual ○ much more than usual
12. Recently been feeling reasonably happy, all things considered?
    ○ more so than usual ○ same as usual ○ less so than usual ○ much less than usual

**C.4:** In the last three months how often have people at work gone out of their way to support you directly in a positive manner (e.g., listened to you, provided information, feedback, and advice, gave encouragement, provided empathy, assistance and support) to make your work life less stressful, easier, and more satisfying?

| | Never | Rarely | Sometimes | Often | Always |
|---|---|---|---|---|---|
| 1. Your immediate boss or supervisor | ○ | ○ | ○ | ○ | ○ |
| 2. Your other co-workers | ○ | ○ | ○ | ○ | ○ |

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| In the **last three months**, overall, how satisfied have you been with people at your work in providing you with the support you wanted and needed? | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Extremely Satisfied |
|---|---|---|---|---|---|
| 1. Your immediate boss or supervisor | ○ | ○ | ○ | ○ | ○ |
| 2. Your other co-workers | ○ | ○ | ○ | ○ | ○ |

Shade Circles Like This--> ●
Not Like This--> ⊗ ✓

| **C.5** For each of the following statements, please indicate your level of agreement. | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. I am not a worrier. | ○ | ○ | ○ | ○ | ○ |
| 2. I like to have a lot of people around me. | ○ | ○ | ○ | ○ | ○ |
| 3. I tend to be cynical and sceptical of others' intentions. | ○ | ○ | ○ | ○ | ○ |
| 4. I often feel inferior to others. | ○ | ○ | ○ | ○ | ○ |
| 5. I laugh easily. | ○ | ○ | ○ | ○ | ○ |
| 6. I believe that most people are basically well-intentioned. | ○ | ○ | ○ | ○ | ○ |
| 7. When I'm under a great deal of stress, sometimes I feel like I'm going to pieces. | ○ | ○ | ○ | ○ | ○ |
| 8. I don't consider myself especially "light hearted". | ○ | ○ | ○ | ○ | ○ |
| 9. I believe that most people will take advantage of you if you let them. | ○ | ○ | ○ | ○ | ○ |
| 10. I rarely feel lonely or blue. | ○ | ○ | ○ | ○ | ○ |
| 11. I really enjoy talking to people. | ○ | ○ | ○ | ○ | ○ |
| 12. I think that most people I deal with are honest and trustworthy. | ○ | ○ | ○ | ○ | ○ |
| 13. I often feel tense and jittery. | ○ | ○ | ○ | ○ | ○ |
| 14. I like to be where the action is. | ○ | ○ | ○ | ○ | ○ |
| 15. I'm suspicious when someone does something nice for me. | ○ | ○ | ○ | ○ | ○ |
| 16. Sometimes I feel completely worthless. | ○ | ○ | ○ | ○ | ○ |
| 17. I usually prefer to do things alone. | ○ | ○ | ○ | ○ | ○ |
| 18. My first reaction is to trust people. | ○ | ○ | ○ | ○ | ○ |
| 19. I rarely feel fearful or anxious. | ○ | ○ | ○ | ○ | ○ |
| 20. I often feel as if I'm bursting with energy. | ○ | ○ | ○ | ○ | ○ |
| 21. I tend to assume the best about people. | ○ | ○ | ○ | ○ | ○ |
| 22. I often get angry at the way people treat me | ○ | ○ | ○ | ○ | ○ |
| 23. I am a cheerful, high-spirited person. | ○ | ○ | ○ | ○ | ○ |
| 24. I have a good deal of faith in human nature. | ○ | ○ | ○ | ○ | ○ |
| 25. Too often, when things go wrong, I get discouraged and feel like giving up. | ○ | ○ | ○ | ○ | ○ |
| 26. I am not a cheerful optimist. | ○ | ○ | ○ | ○ | ○ |
| 27. I am seldom sad or depressed. | ○ | ○ | ○ | ○ | ○ |
| 28. My life is fast-paced. | ○ | ○ | ○ | ○ | ○ |
| 29. I often feel helpless and want someone else to solve my problems. | ○ | ○ | ○ | ○ | ○ |
| 30. I am a very active person. | ○ | ○ | ○ | ○ | ○ |
| 31. At times I have been so ashamed I just wanted to hide. | ○ | ○ | ○ | ○ | ○ |
| 32. I would rather go my own way than be a leader of others. | ○ | ○ | ○ | ○ | ○ |

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## Section D

Shade Circles Like This--> ●
Not Like This--> ⊗ ⊘

**D.1:** Financial dependants

Do you have any financial dependants? ○ Yes ○ No

**D.2:** Please indicate the trade union(s) of which you are a member:

○ None ○ NTEU ○ CPSU ○ Other

**D.3:** Have you lodged or been granted a workers' compensation claim while working at an Australian university?

○ No Please go to question D4

○ Yes Was this claim directly related to stress or psychological injury? ○ Yes ○ No

Was this in the last 3 years? ○ Yes ○ No

**D.4:** a) What is the status of your employment? ○ Full-time ○ Part-time

b) is this status... ○ Continuing / Permanent ○ Fixed term

c) If you work part-time please indicate your work fraction

○ 0.1 ○ 0.2 ○ 0.3 ○ 0.4 ○ 0.5 ○ 0.6 ○ 0.7 ○ 0.8 ○ 0.9

**D.5:** How long have you worked for your current University? Please write in the number of years:

☐☐ years

**D.6:** a) Please indicate thearea you in which you work the majority of the time. You will not be identified from this information.

**Academic Area**

○ Agriculture
○ Built Environment
○ Business Administration
○ Economics
○ Education
○ Engineering/processing
○ Health Sciences
○ Humanities
○ Law
○ Mathematics/Computing
○ Sciences/Renewable Resources
○ Social Sciences/Studies
○ Visual/Performing Arts

**Non Academic Area**

○ Central Administration
○ Library
○ Operations Support
○ Student Services

**D.6:** b) Please write the name of your department or school here. You will not be identified from this information. If you do not work in a department or school, please write the name of your work unit.

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

**D.7:** Do you wish to change your formal working hours? ○ No ○ Yes, increase hours ○ Yes, decrease hours

**D.8:** How many hours do you work in an average week? Please write a whole number, not a range, e.g., if you usually work 35-45 hours a week, please write 40 hours. Do not include minutes.

☐☐ hours per week

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**D.9:** How often do you need to work after hours (i.e., weekends and evenings) to meet deadlines?

○ Never ○ Rarely or occasionally ○ Once or twice per month ○ Most days

**D.10:** a) Do you travel between campuses? ○ No ○ Yes

b) If yes, how inconvenient is it for you?

○ Not at all inconvenient ○ Slightly inconvenient ○ Moderately inconvenient ○ Very inconvenient

**D.11: Staff Appointment (for general staff only - academic staff please go to question D.12 below)**

a) Below please indicate the level of your current classification:

○ HEW1 ○ HEW2 ○ HEW3 ○ HEW4 ○ HEW5 ○ HEW6 ○ HEW7 ○ HEW8 ○ HEW9 ○ HEW10

b) Other general staff classification (specify) | | | | | | | | | | |

c) Years in current classification | |

**D.12:** Staff Appointment (for academic staff only)

a) Below please indicate the level of your current classification:

○ Level A ○ Level B ○ Level C ○ Level D ○ Level E ○ Other (please specify) | | | | | | | |

b) Years in current specification | |

## Section E

The following questions refer to work-related changes that have taken place since the last survey:

**E.1:** During the past 3 years has your university undertaken any measures to reduce stress among its employees?

○ Yes ○ No ○ Don't know

**E.2:** Has the overall level of stress you experience at work changed during the last three years?

○ Yes, decreased a lot ○ Yes, decreased a little ○ No change ○ Yes, increased a little ○ Yes, increased a lot

**E.3:** Is there anything else you would like to add that has not come up already on the questionnaire? If yes, please state below.

_____

_____

_____

**Thank you for your valuable contribution to this important research.**

Please post the completed questionnaire to National University Stress Project, c/- Carolyn Boyd, School of Psychology, University of South Australia, City East Campus, GPO Box 2471, Adelaide, SA 5001.

If you have any concerns about this research that cannot be answered by the Chief Investigator, Professor Winefield, you may write to the Chair, University Ethics Committee, University of South Australia, City West Campus, GPO Box 2471, Adelaide, SA 5001.