STRESS:

A Practitioner's Perspectives

On The Stressor-Strain-Health Relationship

Volume I

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Acknowledgments

For Ben

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ABSTRACT

This thesis offers a practitioner's perspectives on stress through an investigation of job stress; a case study of an individual suffering from chronic stress; and a review of stress, coping and positive adjustment to the isolated and confined environment (I.C.E.) of Antarctica.

A convergence of methodologies is adopted in the job-stress research. A quantitative approach in Phase I utilises the Job Stress Survey (Spielberger, 1994) and General Health Questionnaire-12 (Goldberg, 1972) to measure the scale, severity and frequency of occupational stress in a sample of NHS managers (n=189). Phase II involves a qualitative exploration of job-stress experienced by a sample of purposefully selected managers (n=12) using semi-structured interviews and computer-aided grounded theory analysis. The survey found that the prevalence of psychological ill health among the sample of managers (46.8%) was significantly higher then that of comparable NHS managers (32.8%) and managers in the general working population (21.3%). Phase II explained differential health outcomes through the characteristics or core categories of 'fit' versus 'unfit managers' who utilise a broad range of flexible coping strategies, reciprocal relationships, support, and robust, resilient personality characteristics, which act as stress resistance-resources. The study emphasises the importance of researching the moderating influence of personality, environment and support variables in order to account for differential health outcomes within the stressor-strain-health relationship and make recommendations for future action.

The case study demonstrates the use of a Multimodal approach, developed by Arnold Lazarus, (1989), to aid the assessment of a nurse suffering from multiple symptoms of chronic, work-related stress. The counselling psychologist integrates the Multimodal approach with Rational Emotive Behavioural Therapy, theory, techniques and strategies, and describes the content and process of the stress counselling programme.

The review details features of Antarctic isolation – its deprivations and delights - and the positive human strengths required to cope and adjust to the novel and unique physical and sociocultural environments of Antarctic research stations. It aims to facilitate human adjustment and performance and be a helpful guide for anybody who wonders how they might get on in similar circumstances.

Section A: Preface

Section B: Job Stress in NHS Managers – A Bi-Modal Investigation of the Stressor-Strain-Health Relationship

Section A: Preface

Overview

The unifying theme of this thesis is 'stress' which can be viewed as the struggle to adapt to the pressures of everyday life (R Lazarus, 1999). Stress is experienced when there is an imbalance between the demands (perceived or real) of the physical, social, and cultural environment and the efforts, ability, and resources of an individual to manage or cope with those demands (Lazarus & Launier, 1978). Stress is neither solely a property of the person nor of the environment, but arises in the ***relationship*** between the two. The emphasis here is on stress as a dynamic ***process*** of adaptation, moderated by personality, situational and sociocultural factors.

In this thesis, stress is considered from a practitioner perspective at three different levels: at the *individual* level in the case study; at the level of the *organisation* in the research component; and at the level of a unique physical and socio-cultural environment of *Antarctica*, in the literature review. Stress is also addressed from a pathogenic perspective with respect to its negative impact on psychological health and well being; and a salutogenic perspective (Antonovsky, 1979), which regards stress as a challenge, stimulating people to utilise their resistance resources to cope and stay healthy. **The research component** (Section B) addresses job stress through a bi-modal investigation i.e. a quantitative survey followed by a qualitative exploration of the stressor-strain-health relationship in a sample of managers in one NHS hospital Trust. **The case study** (Section C) addresses a Multimodal assessment and Rational Emotive Behavioural approach to stress counselling and stress management applied by a counselling psychologist in an Occupational Health setting. **The review** (section D) addresses stress, coping and positive adjustment to the challenges of working on the *I.C.E.* (isolated and confined environment) of Antarctica.

(Section B) The Research Component

The present study emerged out of a desire to identify and understand the extent and nature of the work-related challenges currently encountered by an occupational group that appears to have been neglected in empirical research – *health service managers*. As a counselling psychologist working in Occupational Health, the researcher is seeking empirical evidence of job stress among healthcare managers in order to provide an objective basis for future action to counter the negative impact of those challenges. The impetus for this study comes from several different areas:

- The Human Resources document, *HR in the NHS Plan* (Department of Health (DoH), 2002) builds on the commitments of *The NHS Plan* (DoH, 2000), emphasising the need for a healthy workforce to achieve high quality patient care.

- The Nuffield Trust Partnership (1998) reports significant stress-related problems in NHS staff, many of which are preventable and treatable.
- There is little empirical research on UK health service managers. The limited literature suggests that the specific problems of stress within this occupational group have gone largely unrecognised.
- What evidence there is suggests that a high proportion of healthcare managers are experiencing high levels of work-related stress which poses a potential threat to their health, the health of the organisation, and to patient care.
- Clinical evidence reveals that managers generally tend to seek help from the Staff Counselling Service only when their own psychological problems are severe and they have been off sick for some time. Many managers state that they are happy to refer their subordinates for counselling but are unwilling to seek help for their own stress problems.
- Working in Occupational Health, the researcher is aware of the Health & Safety Executive (HSE, 2001, 2002) recommendations to address organisational stress as a 'psychosocial hazard' within a risk assessment framework. HSE stress audit guidelines provide a framework partially encompassed in this study (Cox et al, 2000).
- The obligations of evidence-based management (Stewart, 2002) require policy and management decisions to be based on quality information gathered from a combination of sources, including comparable organisations as well as skilful analysis and diagnosis. The objective is to improve patient care through more effective management.

Research Study Aim

The purpose of the present study is to investigate the prevalence and nature of job stress in a sample of managers in a general hospital. The transactional model of stress is adopted as a framework for exploring the dynamic relationship between workplace pressures experienced by the managers and the consequences of those pressures in terms of the managers' psychological health and well-being. The emphasis is on stress as a process and stress as a relational construct (R Lazarus, 2000).

With respect to the measurement of stress, there has been considerable debate about whether potential stressors and strains should be measured objectively or subjectively. On the one hand, it is clear that personality dispositions, attitudes, beliefs, values and resources shape an individual's perceptions of stress and their coping strategies. On the other hand, some objective measure of stress hazards and health outcomes is required to enable comparison with other management samples and to make an evidence-based case for future interventions. The present study thus adopts the recommendation of Cooper et al, (2001) to move away from a total reliance on quantitative measures of stressors and strains. A joint approach that incorporates

both quantitative and qualitative methods is utilised to move beyond our initial understandings of the stress process and produce a richer account of the local meanings of job stress, and the interactions that create those meanings, than is possible using one methodology alone.

(Section C) The Case Study

Stress is experienced when the demands of a particular situation are evaluated by an individual as about to tax or exceed available resources, thereby threatening well-being and necessitating changes in personal functioning to 'manage' the situation (R Lazarus, 1991). These changes may be adaptive and help develop a sense of self-efficacy; or maladaptive, representing a threat to personal health and well-being.

It is widely accepted that the experience of long-term stress may take a significant toll on the health and well-being of individuals (Cooper et al, 2001) as well as on their social and occupational functioning. From a counselling psychologist's perspective, working with clients suffering from chronic stress problems is inherently complicated as individuals usually present with multiple psycho-physiological symptoms, moods and behaviours.

The case study demonstrates how the Multimodal Approach, developed by Arnold Lazarus (1989), can be used to aid the assessment of a client, a senior nurse, who is suffering from the effects of chronic, work-related stress. A rationale is provided for integrating the Multimodal approach with rational emotive behaviour therapy, theory, techniques and strategies (Kwee & Ellis, 1997). A modality profile and a second order BASIC I.D. profile are developed and used as the link between assessment and the stress counselling programme (Palmer, 1992). A range of psychometric assessment tools is used to assess progress and a session-by-session report is outlined.

(Section D) The Critical Review

The review focuses on the stressors and strains experienced by individuals and groups as they adapt to the novel and unique physical and sociocultural environments of Antarctic research stations. This review was driven by the requirement of the counselling psychologist to present a seminar on 'coping with the challenges of isolation and confinement in Antarctica' to a small group of medical doctors in the British Antarctic Survey Medical Unit attached to the hospital as part of their preparation and training program. Obtaining empirical evidence of the human experience in Antarctica and consolidating it in the review was the first step in preparing and providing a sound basis for the seminar. It was also important not to allow any pre-conceived stereotypical images of the heroic era of early Polar expeditions to bias my presentation.

The popular interest in behavioural psychology and the dynamics of isolated human groups has flourished recently with the advent of such TV 'fly-on-the-wall' phenomena as Big Brother,

Survivor and Castaway all of which have used psychologists as expert commentators or as voices to add authority (Gardner & Herbert, 2002). However, it might be fair to say that Antarctica was probably one of the first natural laboratories for studying human behaviour and psychology (Goldsmith & Lewis, 1960). Human reactions to the prolonged stressors of isolation and confinement have been systematically investigated at Antarctic research stations for over 40 years. Since the International Geophysical Year (IGY) in 1957 there has been a continuous human presence on Antarctica with the prime objective of scientific discovery. There are currently 45 research stations with about 4000 scientists and support staff in summer, falling to about 1000 in winter. In addition there are several summer-only stations, numerous field camps, research vessels and sub-Antarctic stations (US Antarctic Program, 2003). Stations differ with respect to size, micro-culture, social group, length of isolation, and environmental severity (Mocellin et al, 2000).

The study of how people react to environments such as Antarctica occupies a unique niche in the overall study of stress. Such an extreme and novel environment provides a combination of sensory stimuli not found elsewhere and an ambient environment for which human beings are evolutionarily unprepared (Palinkas, 1989). The ice and frigidity of Antarctica dictate that activities are weather-dependent and, together with the polar winter darkness, impose considerable demands on personnel. Life without technical support is at the limits of survival.

Review Aims

Thus, for Antarctic sojourners, stress can be conceptualised as a dynamic, adaptive process as individuals struggle to cope and adjust to the novel and potentially hazardous physical environment and the unique micro-cultures of research stations and groups. This review will consider studies of psychological adaptation and adjustment in the isolated and confined environments (I.C.E.) of Antarctica and relate the findings to the constructs of the stress paradigm with respect to stressors, strain, coping, and moderator variables. The review details features of Antarctic isolation - its deprivations and delights – and aims to facilitate human adjustment and performance and be a helpful guide for anybody who wonders how they might get on in similar circumstances. The main objectives are:

- To draw attention to the long history of research into stress and coping (human adaptation) in Antarctica which has received little consideration from mainstream stress researchers.
- To alert Antarctic sojourners to what is 'normal' stress in this environment and what may be a pathological reaction to adverse conditions.
- To encourage potential venturers to Antarctica to prepare themselves mentally for working in isolated confined environments and darkness.

- To raise medical doctors' awareness of key socio-psychological factors which may affect Antarctic visitors as they adjust to the conditions so that support and early interventions may be offered.
- To aid understanding of individual differences, stress resistance resources and personality characteristics that enable people to cope and stay healthy despite being under considerable pressure.
- To highlight Antarctic research as a useful source of leadership, micro-culture and group studies, salutogenic and positive aspects of stress.

Personal Statement

This portfolio reflects my academic and professional background as a chartered counselling psychologist working in an Occupational Health setting within a large general hospital. Attached to the hospital are a large contingent of Naval doctors and nurses and the British Antarctic Survey medical team. I have set up a staff counselling service that offers psychological counselling to staff with clinical and interpersonal problems within the organisation. I also offer proactive/preventative stress management programs which are specifically tailored to the needs of particular occupational groups within the Trust, such as midwives, radiographers, doctors, laboratory staff, etc. My first career before counselling psychology was as a teacher of geography and geology, hence my particular interest in the British Antarctic Survey work from a combined perspective of environmental psychology.

This portfolio is submitted in the hope that the material covered can be applied to the development of effective stress management interventions at individual and group levels and assist with the construction of healthy organisations. The researcher, as a counselling psychologist, also aims to gather information that captures the depth and richness of people's experiences and to generate data that can be used to further our knowledge of the stressor-strain-health relationship and the role of personality, situational, and socio-cultural moderators in that relationship.

Section B: Job Stress in NHS Managers[1]: A Bi-Modal Investigation of the Stressor-Strain-Health Relationship

Chapter 1: Introduction

The negative consequences of stress in organisations (Cooper, Dewe & O'Driscoll, 2001) and the inherently stressful nature of working in the United Kingdom National Health Service (NHS) (Nuffield Trust, 1998) have been well documented in recent years. Concern has been raised about the impact of stress and its human and economic costs, for example, sickness absence, reduced efficiency, low morale and job turnover, and the risks this poses for health service organisations, staff and patients. Many small-scale studies have shown that work-related stress is a problem for hospital doctors, GPs and nurses (Firth-Cozens, 1999). Recent research has highlighted managers (Smith et al, 2000) and, in particular, health service managers (Borrill et al, 1996, 1998), as an occupational group exposed to the considerable risks of ill-health caused by job-related stress. However, there has been little empirical research on the impact or nature of job stress on health service managers.

This chapter seeks to orientate the reader to the nature of the challenges for health service managers through a consideration of the literature on organisational stress, stress amongst managers in general, and health service managers in particular. Chapter 2 gives an overview of contemporary models of stress and work stress to provide a framework for the research. Chapters 3 and 4 seek to explain the variation in health outcomes amongst individuals experiencing work-related stress through a consideration of the literature on environmental, social and personality-centred factors.

1.2 The Scale Of Occupational Stress In General

There is now considerable evidence that job stress poses a threat to the health of workers and in turn to the health of organisations (Smith et al, 2000; Stansfield et al, 2000; Cooper et al, 2001; Wainwright & Calnan, 2002). Job stress can be defined as the 'harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources or needs of the worker' (NIOSH, 1998:6). Job stress can lead to poor health and even injury with very high human and economic costs (Marmot & Feeney, 2000; Steptoe, 2000). For example, the large-scale 'Bristol Stress and Health at Work Study,' which was set up to determine the scale and severity of occupational stress in a random community sample of over 17,000 employees (Smith et al, 2000), found that 20% of respondents reported very high or extremely high levels of stress at work. The scale of occupational stress was associated with both demographic and occupational factors. Specifically, greater reported occupational stress was

[1] The author has been invited by the editor of Health Education Journal to submit an article on the construct of 'fit' versus 'unfit' manager arising from this research.

associated with being middle-aged, widowed/divorced or separated, educated to degree level, in full-time employment earning over £20000, and having an occupation such as teaching, nursing or being a *manager*. Job characteristics such as working long, unsociable and unpredictable hours; high work demands; having less control over work speed and working time; lack of social support and lack of consistency/clarity at work were associated with raised stress levels. These findings are in keeping with those of other major workforce studies.

1.3 Job Stress In Managers

Managers have been highlighted in research as an occupational group at considerable risk of the threat of ill-health caused, or made worse, by high levels of job stress (Cavanaugh et al, 2000). For example, the results of the Bristol Study (Smith et al, 2000) found that 27.8% of managers reported very high or extremely high levels of stress compared with an average 20% of all respondents in their study. Indeed, work-reported stress among managers has been described as reaching epidemic proportions (Marino, 1997). In surveys of managers, 88% reported elevated levels of stress (Tillson, 1997), and most reported feeling more pressure than they could ever remember (Cohen, 1997). Hobson and Beach (2000) found over 60% of managers at two factories were at risk of developing psychological ill health.

Several studies have suggested that managers experience higher levels of stress than other occupational groups although the findings are inconsistent (Long, 1998; Stansfield & Marmot, 1992). Mullarkey et al (1998) reported considerable variations in the prevalence of stress using the GHQ-12 (Goldberg, 1972) across a wide range of occupational groups, with the highest rate of 31% found amongst managers. Turnage and Spielberger (1991) found that managers reported experiencing job pressures such as lack of support more often than professionals/engineers.

Although researchers tend to agree on the *general work characteristics* associated with high job stress (Cooper et al, 2001), there appears to be little empirical research identifying job stressors *specific to managers* as an occupational group. According to Handy (1999) stress is largely inherent in the managerial *role* considered below.

1.4 Job Stress In The Managerial Role

The last quarter-century has seen the emergence of the 'manager' as an established profession in society. It is a recognised occupational role and one that embraces something like 10% of the total UK workforce. 'Managers are no longer a small minority in the community of occupations. They are the executors of many of our most valued and significant social processes' (Nicholson & West, 1996:32).

What is manager? A simple definition is 'One who is required to facilitate and co-ordinate the efforts of others to achieve organisational objectives..... Increasing numbers of people are managers; charged with the task of supervising, co-ordinating, integrating and interacting to achieve organisational goals' (Nicholson & West, 1996:32). However, according to Handy (1999:320), it has never been easy to define what a manager is or what he does - the difficulty is one of roles. Within the increasing complexity of modern organisations the range and variety of managerial tasks are continually expanding and the boundary between general manager and technical specialist is becoming increasingly indistinct (Stewart, 2002). Mintzberg (1983) suggests ten managerial roles including: figurehead, leader, liaison, monitor, disseminator, spokesman, entrepreneur, disturbance-handler, resource-allocater, and negotiator. Handy (1999) integrates these roles into *leading, administrating* and *fixing.* The mix of roles varies from job to job. Boundaries may blur and there is the potential for role overload, role ambiguity and role conflict.

In the past 20 years, organisational restructuring has proceeded apace and managers can no longer feel secure that their psychological well-being will be safeguarded by life-long attachment to a single employer. Organisations and careers are increasingly precarious and organisational downsizing and restructuring, with associated managerial redundancies, continue (Karambayya, 2002). For managers there is the constant pressure to update skills and knowledge to retain their status in organisational systems and the labour market (Stewart, 2002). Handy (1999) argues that organisations and individuals have yet to come to terms with the fact that the term 'manager' means too much and, as a result, can be a very confusing job title. He suggests that any measured rationality in managerial work has to be forged out of the hectic and apparent chaos of unscheduled demands, fragmented interactions and ad hoc decisions. There is thus considerable potential for job-related strain, but are managers aware of or concerned about occupational stress?

It seems that little attempt has been made to find out what managers understand by stress and the extent to which they think organisations have a responsibility to address stress-related problems (Dewe & O'Driscoll, 2001). Few senior managers consider stress to be a risk that should be actively managed at the organisational level. Daniels (1996) suggests this is because the dominant cognitive bias within management cultures is *individualist.* Since the individualist perspective emphasises personal choice in dealing with hazards, managers are likely to perceive stress to be an individual problem rather than an organisational one and, therefore, not the responsibility of the organisation to manage. However, on a personal level, managers are unwilling to attend stress management workshops as they do not want to appear as failing or weak in the workplace (Sharpley & Gardner, 2001), regarding stress as a personal loss of control in the physical, behavioural and emotional domains.

Thus, empirical studies have consistently confirmed that occupational stress is a major problem for managers and recommend a focused consideration of future research on this occupational group. The lack of research literature on managers in the UK NHS, however, suggests that the specific problems of stress within this occupational group have gone largely unrecognised. It is thus the intention of the present study to focus on healthcare managers and identify and explore their particular stress-related problems.

1.5 NHS Managers: The Prevalence Of Stress

The United Kingdom National Health Service (NHS) encompasses the activities of a workforce of one million, making it the nation's largest employer and one of the largest civil organisations in the world. It delivers services on a massive scale to the entire UK population. The NHS today faces a number of key issues such as infinite demand and resource limitations together with the indifferent results of successive waves of reorganisation since its inception in 1948 (Webster, 2002). The assertion that managers are now influential in the UK National Health Service to an unprecedented extent is commonplace and widely accepted (Learmonth, 1997). Management has become a central issue in the organisation that is the new National Health Service (Hearing et al, 1999).

In 1998, the Nuffield Trust reviewed evidence on the health of the NHS workforce with a view to providing an objective basis for future action. 'The importance of addressing this challenge lies not only in the concern for the welfare of the staff of the NHS, but also in its implications for the quality of patient care' (Nuffield Trust, 1998:7). The review showed worrying levels of psychological disturbance among hospital doctors and nurses, that this ill-health was associated with aspects of work, and that the cost implications for the NHS were serious. The Nuffield Trust identified minimal research on managers and other staff groups but what they did find suggested a comparable state of affairs with over a third of health service managers suffering from high levels of psychological disturbance. This was higher than for non-NHS managers, as high as for doctors, and women managers experienced the highest levels of work related stress.

The Nuffield Trust highlighted gaps in the evidence base and recommended that future research should consider the relationship between NHS work factors and health outcomes for staff groups other than doctors i.e. for healthcare managers. A major part of their review comprised a longitudinal study of over 11,000 NHS employees carried out in 17 healthcare trusts (Borrill et al, 1996, 1998; Wall et al, 1997). Using the General Health Questionnaire-12 (Goldberg, 1972) as a measure of stress, the mental health of the workforce in NHS Trusts was found to be significantly poorer (26.6%) than that of employees in the general working population outside the NHS (18.4%). Work characteristics associated with stress included: high work demands,

low influence over decisions, poor feedback on performance and high role conflict. A comparison across Trusts found that rates of psychological disturbance varied from 17-33% with lower rates in NHS Trusts characterised by smaller size, greater co-operation, communication and performance-monitoring, a stronger emphasis on training, with more control and flexibility in their work.

1.6 Stress In NHS Managers: Comparison With Other NHS Occupational Groups

There is conflicting evidence as to whether the prevalence of stress among healthcare managers is higher than in other occupational groups working in the NHS. Caplan (1994) found no difference in the prevalence of stress among managers, consultants and general practitioners. Litwinenko & Cooper (1995) reported that psychological ill-health was poorer among senior managers in comparison with other occupational groups. The longitudinal study by Borrill et al (1996, 1998), however, has consistently found the prevalence of stress to be higher among managers than for other NHS occupational groups (i.e. nurses, doctors, allied health professionals, technical, ancillary, and administrative staff).

1.7 Comparisons With Private Sector Managers

The general consensus is that the role of managers is demanding and that they are exposed to a wide range of generic work stressors (Stewart, 2002). However, discussions of the differences between managers working in public and private sector organisations suggest that the former may be exposed to additional work, role and organisational stressors. There is some evidence to support this contention. For example, a comparison between the prevalence of stress among managers in the NHS (32.8%) (Borrill et al, 1998), managers in the British Household Panel Survey (21.3%) (BHPS, 1997), and managers in manufacturing (23%) (West et al, 1995), showed the prevalence of stress to be higher for healthcare managers. Stress was measured in all these studies using the GHQ-12. Possible explanations for the high stress levels among NHS managers are considered below.

1.8 Challenges Facing NHS Managers

The pressures to which the NHS has been subjected in recent years raise concerns about the well-being of the healthcare workforce (Webster, 2000). Most of the pressures affecting health service managers arise out of the continuing NHS reforms, managerialism, competing value systems, increasing public expectations, media criticism, limited capacity and resources. Management has become a central issue in the organisation that is the new National Health Service (Hearing et al, 1999). NHS managers are part of a health service workforce 'war-weary from the continuous disruption occasioned by market reform' (Webster 2002:238). 'The story since 1948 is one of almost constant change. The NHS has reinvented itself as new challenges

emerge. An aging population, changing patterns of disease, technological development, fluctuating economic fortunes, concern over public spending, and new political ideologies and agendas have all contributed to this moving picture of health care' (Wall & Owen, 2002:163).

According to Webster (2002:23), since 1997 the New Labour Government's structural overhaul of the NHS has been even more rapid and dramatic than the internal market changes of the Conservatives. Health service employees have had to meet new demands and new conflicts as a result of this sharp escalation of change. Growing economic pressures, technological advances, modernisation, and patient expectations have meant that issues such as rationing, evidence-based health care, clinical audit, and accreditation present managers with new demands and levels of accountability. Costs are a crucial part of the agenda at every level while, at the same time, the quality of care delivered has become increasingly open to professional and public scrutiny. In addition, healthcare managers work in large, complex organisations which house different groups of stakeholders, most notably clinicians, managers and patients, each with their own particular values and culture. Managers have to deal with the ongoing tension between political influence and involvement, managerial entrepreneurialism and public sector values (Wall & Owen, 2002).

Against this background of uncertainty, inconsistency, strained resources, raised expectations, and media attention, managers must continue to strive to improve the health of the nation and the quality and range of healthcare services, and, as the Director of the Institute of Health Service Management (Caines, 1998:48) puts it *'The question is whether all this is manageable, and whether any manager can be expected to bear such crushing weight of expectations?'*

1.9 Purpose Of The Present Study

Caines (1998) argues that, if the NHS is to achieve its goals of modernisation, effective managers will be crucial and should be valued – good management is as fundamental to better health as good clinical quality to better healthcare. Thus, given that the well-being of the NHS workforce is an essential prerequisite to patient well-being (DoH, 2000), it is important for this study to investigate the *extent* and *nature of job stress* in a sample of NHS Trust managers in order to provide an objective basis for future interventions to assist the construction of a healthy organisation (Welsh, 2002).

An outline of the research questions, hypotheses and rationale for the present study is given in Chapter 5, following a critical consideration of: models of stress; social, environmental and personality variables that moderate the stressor-strain-health relationship; and the role of coping in the stress process.

Chapter 2: Theories of Stress

2.1 Introduction

Stress is a complex phenomenon, the definition of which has fired considerable debate and discussion. The way in which stress is defined has a fundamental impact on how research is conducted and results are explained, and definitions must capture the essence of the experience rather than simply reflect a rhetoric (Newton, 1995). Thus, a clear conceptualisation of stress is necessary to provide a framework for the present study. This chapter sets out several theories that aim to predict and explain the relationship between stress, coping and health outcomes. Stimulus, response, interactional, transactional, and work-related models of stress are critically reviewed.

2.2 Stress Definitions

Historically, stress has been defined as:

- A **response** - (Cannon, 1929; Selye, 1946) - dependent variable.
- A **stimulus** - (Symonds, 1947; Sutherland & Cooper, 1993) - independent variable.
- An **interaction** between a stimulus and response (Cox, 1978).
- A relationship or **transaction** between an individual and the environment (Lazarus, 1966; Lazarus & Launier, 1978).

A response-based approach considers stress to be **within the person** as a response to threatening stimuli. A **stimulus-based approach,** with its roots in the engineering model, views stress as some **external force** that impinges on an individual in a harmful or disruptive way. These early models of stress, although conceptually relatively simple, have been useful in providing a taxonomy of stress-related symptoms and sources of stress. However, they give little attention to the inherent properties of different stimuli and responses e.g. frequency, duration, demand, pattern, intensity and severity. They are criticised for ignoring individual differences and the perceptual and cognitive processes that might underpin those differences (Sutherland & Cooper, 1993). They reflect only one component of the stress process, saying little about the ***process*** itself (Cooper et al, 2001).

2.3 Interactional Definition Of Stress

The interactional definition of stress represents a fusion of the stimulus and response models. Stress is the whole ***process*** from encountering stressful stimuli in the environment through to the responses of the individual, with the accompanying physiological changes and phenomenological experience of stress (Cox, 1978). This approach is useful for drawing attention to the separate constructs of the stress interaction: sources of stress, potential

moderators of the stress response, and the manifestation of stress. Situations are regarded as potentially stressful rather than inherently stressful (Bartlett, 1998). This interactive model also recognises the recursive principle that, not only does the environment affect the person, but also the person affects the environment. The focus of the interactional approach is the statistical relationship between the stimulus and the response - usually correlational or cause and effect (Stahl et al, 1975). Although the approach allows the identification and measurement of the effects of moderator variables, it can be criticised in that explanations of the complexity of the stressor-strain relationship are limited to quantitative or structural manipulations (Cooper et al, 2001).

2.4 Transaction or Interaction?

Richard Lazarus (1999:12) argues that, in addition to interaction, we need to speak of *'transaction'* and *'relational meaning'* in the stress process. For example, a sense of *'threat'* may arise when a person with an important goal faces an environmental condition that endangers that goal. *'Threat'* is the meaning the person constructs from the confluence of personality and environmental variables. This relational meaning is not inherent in the separate personality and environmental variables - it is construed by the person (Dewey & Bentley, 1949). *'Transaction'* thus adds the ***personal meaning*** of what is happening in the perceived event.

A detailed account of the transactional model is given below to provide both a flip-flop (iterative) reference point for the qualitative Phase II of the present research and a theoretical basis for the counselling psychology case study.

2.5 A Transactional Theory Of Stress & Emotion

The 'transactional' model of stress (Lazarus[2], 1966, 2000; Lazarus & Folkman, 1984) offers a conceptual framework for exploring the dynamic relationship between the pressures experienced by an individual (e.g. a manager) in a particular environment (e.g. an NHS hospital Trust) and the consequences of those pressures on that individual in terms of his or her physical and mental health. A core concept is that stress is viewed as a transaction - an ongoing relationship between the individual and the environment. The model emphasises stress as a dynamic process rather than a static state, as people usually attempt to change that which is undesirable or distressing in order to restore a sense of homeostatic balance or equilibrium (Dewe et al, 1993).

[2] Refers to Richard Lazarus' transactional theory of stress.

Within the transactional paradigm, Lazarus[2] (1999) offers a cognitive-motivational-relational approach to stress and its accompanying emotions. He argues that stress is neither a property of the person nor of the environment but arises in the relationship between the two. As such, stress encompasses a set of cognitive, affective and coping variables. ***Stress arises when the demands of a particular encounter are evaluated by the individual as about to tax or exceed the resources available, thereby threatening well-being (Lazarus[2], 1991) and necessitating a change in individual functioning to 'manage' the encounter.***

2.5.1 Appraising

Lazarus[2] (1981, 2000) contends that people are constantly evaluating their relationships with the environment with respect to the implications for their personal well-being. The term used for the act of evaluation is '*appraising*' which emphasises the appraisal process as set of cognitive actions. Two kinds of appraising are differentiated: primary and secondary appraising. In primary appraising, an individual gives meaning and personal significance to the situation and evaluates what is personally at stake. The individual makes a judgement as to whether there is any **threat** to their personal goals, relationships, core beliefs, values, and general well-being. Secondary appraising refers to the perceived **availability of coping resources** for dealing with the stressful encounter. At this stage coping options are evaluated in terms of available social, economic, organisational and personal resources - including self-confidence, self-efficacy, and level of control that individuals perceive they have over the situation. Appraising may be a deliberate, largely conscious process or it can be intuitive, automatic and out of awareness.

2.5.2 Stress, Coping & Emotion

In the evolution of the transactional model, Lazarus[2] (2000) argues that stress, coping and emotion are interdependent concepts. Coping is defined as *'constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person'* (Lazarus & Folkman, 1984:141). Simply stated, coping is the effort to manage psychological stress. Emotions flow from the way we appraise what is happening in our lives. The primary appraising of threat and the specific meaning of the situation to the person trigger a particular stress emotion consistent with the meaning. Stress emotions include, but are not limited to, anxiety, fear, anger, guilt and sadness. Depression is treated as a composite of several stress emotions. Core relational themes are identified for each emotion, for example, anger arises from a demeaning offence against me and mine; relief occurs when a threat has abated.

Lazarus and Folkman (1984) suggest that all of the constructs in the transactional model, when taken together, affect adaptational or health-related outcomes including: functioning in work and social life, morale, life satisfaction, and somatic health.

2.5.3 Critique Of The Transactional Model

The transactional model endeavours to explore the essential nature of stressor-response-outcome relationships and to encapsulate an understanding of the dynamic stress process itself, not merely the statistical relationship between variables. Researchers now generally agree that stress is relational, involving some sort of transaction between the individual and the environment (Cooper et al, 2001).

The transactional perspective involves extensive psychological mediation and reciprocal feedback loops which cannot be reduced to simple stimulus-response terms. Rather than concentrating on mechanisms or inherent structures, psychological processes and their contexts are the units of analysis in a transactional framework. However, according to Bartlett (1998) the more theoretically rich a model becomes, so the more fuzzy and difficult to operationalise become the constructs that it employs. The difficulties of operationalising the transactional concepts have limited the extent to which the theory has been adequately tested

Recent debate on the cognitive theory of emotion reveals further limitations of the transactional approach. According to Lazarus[2] (1991), cognitive appraisal or evaluation of a potential stressor precedes any form of emotional response. However, there is growing evidence of rapid and direct pathways of affective information-processing that bypass the neocortex and thus are not subjected to conscious awareness (Ledoux, 1998). Only the results of the processing may reach our consciousness - we may feel anxious and we don't know why. Furthermore, the transactional model argues that stress essentially occurs at the individual level, involving the need to focus on individual patterns and intra-individual processes. It may not provide the ***level of analysis*** required to identify those working conditions that are likely to affect the well-being of ***most*** workers (Brief & George, 1991).

2.6 Job-Related Stress - Some Theoretical Models

Research evidence clearly indicates that stress at work can lead to negative health outcomes. A consideration of three theories of work-related stress draws attention to some key constructs of the work stress domain and adds to the framework for the present study. The general systems approach of Cox & McKay (1981), Karasek's (1979) job demands-control model, and the effort-reward imbalance model (Siegrist, 1998) are considered below.

2.7 General Systems Model Of Work-Related Stress

For Cox (1993:29), job-strain is a psychological state that occurs when there is a significant imbalance or lack of fit between an individual's perceptions of environmental (work) demands and his or her inability to cope with those demands. Imbalance occurs via a five stage sequence that includes: the source of the demand; the perception of the demand in relation to coping resources; the recognition of changes in well-being; the evaluation of coping activities; and the feedback or reappraisal of the event. Perceptions of control and of social support are important factors in appraisal.

This model has been adapted by Palmer & Dryden (1995) for practical application in the field of stress management. It is particularly useful in identifying work-related factors that have the potential to create strain for employees (Cox, 1993; Cartwright & Cooper, 1997). The Health and Safety Executive (HSE, 2001) stress risk-assessment guide for managers incorporates these job factors, listed below, into a framework for practical interventions (Palmer et al, 2001). However, the factors are not necessarily discrete and disguise the fact that people's responses to stressors are part of a dynamic process.

1. Factors intrinsic to the job
2. Organisational roles
3. Career development
4. Workplace relationships
5. Organisation structure/culture
6. Home/work interface.
7. Support
8. Change management & communication
9. Control of work demands

2.8 A Control Theory Of Job Stress

The job demands-control model (Karasek, 1979) also explains job-stress within an interactional framework, arguing that strain occurs when high job demands are combined with low decision latitude (a perceived inability to influence tasks and procedures at work). Although the concept of control is recognised as important in the stress process, there is considerable debate about how control should be operationalised and how interactions should be measured. Research findings using this model have been inconsistent (Fox, Dwyer & Ganster, 1993). The recent Whitehall II study of work-related factors and ill health has found some evidence for the association of low decision latitude and high work demands with poor mental health (Stansfield et al, 2000), but these are independent effects and not interactive effects as the model suggests.

2.9 Effort-Reward Imbalance

The model of effort–reward imbalance claims that lack of reciprocity between costs and gains in the workplace, that is, high cost/low gain conditions, define a state of emotional distress with special propensity to autonomic arousal, associated strain and ill-health (Siegrist, 1998). Effort at work is considered part of a socially organised exchange process to which society at large contributes in terms of rewards - primarily money, esteem and status control. However, some employees engage in unfavourable tradeoffs whereby high effort spent at work and low reward '*...violate core expectations about reciprocity and adequate exchange'* (Siegrist, 1998:28). Too much discrepancy between giving much more than we get is an important factor in burnout (Schaufeli & Buunk, 1996), and risks the loss of employee trust, goodwill, loyalty and support (Aryee et al, 2002). The Whitehall II study found that effort-reward imbalance was associated with increased risk of alcohol dependence, psychiatric disorder, long spells of sickness absence and poor health functioning (Stansfield et al, 2000).

2.10 Summary

This chapter demonstrates several points of convergence in the stress paradigm that can provide a common pathway for research, i.e. the presence of a demand, a set of evaluative processes and the generation of a response or strain (Cooper et al, 2001). Job strain occurs when there is an imbalance between the evaluated demands of a work situation or encounter and the resources of the individual to manage those demands. Unfortunately, agreement on these points occurs mainly at the conceptual level and there is considerable wrangling among researchers over how the stress processes should be defined and measured, how they should be incorporated into a work setting, and whether current methodologies can adequately capture their transactional qualities.

2.11 The Present Study

This review of the stress literature raises the question as to which theoretical model offers the most appropriate framework for the present study of job stress in NHS managers? A range of factors, including the research questions asked, the discipline of the researcher and the aims of the study influences which particular definitional approach is adopted. The core aims of the present study in terms of the stress paradigm are the:

- Identification of stressful working conditions and organisational structures i.e. potential job stressors and demands.
- Identification of specific health outcomes or psycho-physiological consequences of those job stressors i.e. job strain.
- Demonstration of significant associations and predictor relationships between job

stressors and strains.

- Exploration of the nature of the stressor-strain relationship, including situational, social and personality-centred variables that may influence that relationship.

The researcher accepts and adopts at a conceptual and theoretical level the contemporary notion that stress is a process that should be defined in transactional terms (Cooper et al, 2001). However, with respect to the present study aims, the first priority of the researcher is the identification of any particularly stressful working conditions and associated levels of strain, followed by a more detailed exploration of the stress process itself (Duckworth, 1986). This points to the need for a bi-modal approach in which, (a) the interactional model offers a deductive framework for statistical analysis in order to **identify and measure** those stressful working conditions that are likely to affect the well-being of most managers in the study (Brief &George, 1991). And (b), the perspective of the transactional model provides a suitable framework to encapsulate the **essential nature** of the stress process and to explore the **personal meaning** of job stress for those managers involved in the study. This combination of rich description together with statistically reliable findings should provide the researcher with powerful evidence to make recommendations for addressing potential workplace hazards and reducing managerial stress.

2.12 Terminology Of Stress

Following the transactional model of the stress process and the terminology suggested by Beehr (1998), the following conceptualisations are adopted in this study:

- **Stress**: the overall transaction process.
- **Stressors**: the events or properties of events (stimuli) encountered by individuals.
- **Strain:** the individual's psychological, physical and behavioural responses to stress.
- **Outcomes:** the consequences of strain at both individual and organisational level.

Stressors therefore are the antecedent conditions and strain is the person's response to these conditions. The term 'stress' will be used to denote the overall process incorporating stressors, strains and coping responses rather than the specific elements of the transaction (Cooper et al, 2001).

Chapter 3: Individual Differences in the Job Stress Process

3.1 Introduction

In recent years there has been increased interest in the role of individual differences in the job stress process (Matthews et al, 2003). This represents a shift in emphasis away from purely environmental factors as an explanation for occupational stress. It recognises the importance of individual differences in perceptions of, and reactions to, environmental conditions generally considered to be job stressors as suggested by Lazarus' (1999) transactional model.

In adopting the transactional model of stress, the present study is making the assumption that individual differences have the potential to influence the variation in NHS Trust managers' vulnerability and reactions to work-related stress, and associated health outcomes. The transactional model (Lazarus & Folkman, 1984) argues that strain occurs when environmental demands or constraints are perceived by a person to exceed his or her capacities to cope. However, despite sharing much with other people and social groups, the degree and type of stress response, even to singularly powerful stress conditions, are apt to vary from person to person, and these variations need to be understood. Part of the variance can be explained in terms of the personal meanings or salience of each transaction to the individual. These personal meanings are shaped by our personalities, personal dispositions, individual goals, attitudes and beliefs that influence whether a potential stressor is appraised as either a threat or a challenge. Two other factors that influence a person's vulnerability to stress are the specific environmental and social variables inherent in the situation (Cooper et al, 2001).

Accordingly, in the transactional model, stressors and strains (health outcomes) may vary greatly from person to person depending on three main sets of variables that have the potential to jointly influence stress vulnerability or resilience:

a) **Personality or dispositional factors** e.g. neuroticism, optimism.
b) **Situational factors** e.g. job demands, role ambiguity, perceived control over the environment.
c) **Social factors** e.g. workplace and family support.

For clarity, these three categories will provide a framework for discussing some of the individual differences that may influence the stress process for healthcare managers in the present study. The intention here is not to discuss all possible **personality dispositions, situations** and **social factors** that have been identified empirically, but to highlight some of the key theories and findings from the literature and to direct attention to their implications for our understanding of stress transactions in the workplace. In addition, the selection of variables for

discussion is influenced by the need to return to some aspects of stress theory that have been highlighted retrospectively in the findings of the qualitative section of the study (an iterative approach) and may relate to stress resilience factors, for example, commitment, self-efficacy, optimism, manageability and meaningfulness of the NHS work environment.

Personality and Stress

3.2 There is abundant evidence showing that personality traits, especially neuroticism (N), are associated with high level of stress symptoms, including mental disorders. With respect to the transactional stress model, personality traits may bias appraisal and coping processes, influencing whether a person is more prone to threat or to challenge and their adaptation to demanding events. Personality factors may also influence the kind of life events a person is more prone to experience and how responsive the person is to stressful events. At a physiological level, there are systematic individual differences in stress reactivity that may have a genetic basis, although it remains to be seen how closely these physiological processes relate to personality (Matthews et al, 2003).

Personality research and theory offer a rich set of constructs to help explore and address the cognitive–phenomenological elements of the stress process. However, difficulties in establishing the nature of the relationship between personality, stress and health remain. These include measurement, the distinction between subjectively reported symptoms and objective signs of strain or ill health, and issues of causation and its direction.

The discussion of different models of personality as they relate to stress will be restricted to three of the best-known multi-trait theories, H J Eysenck's (1967), Raymond Cattell's (1946), and the Five Factor Model of Costa and McCrae (1987). The key stress vulnerability factors of neuroticism and the higher order construct of negative affectivity will also be considered. Type A Behaviour Pattern, and some stress resilience personality variables of hardiness, sense of coherence, self-efficacy, and dispositional optimism will briefly be outlined.

3.3 Eysenck's Three Dimensional Model of Personality

H J Eysenck (1967, 1997) defined personality as a more or less stable and enduring organisation of a person's character, temperament, intellect and physique, which determines the person's unique adjustment to the environment. The robust application of factor analysis to personality data led him to propose that personality is adequately described by three main factors: **extraversion-introversion, neuroticism-stability, and psychoticism-normality, e.g.**

Type	**Traits**
Neuroticism:	anxious, depressed, guilt feelings, low self-esteem, tense, irrational, shy, moody, emotional
Extraversion:	sociable, lively, active, assertive, sensation seeking, carefree, dominant,

surgent, venturesome

Psychoticism: aggressive, cold, egocentric, impersonal, impulsive, antisocial, unempathic, creative, tough minded

(Adapted from Eysenck & Eysenck 1985:14)

Eysenck's model is hierarchically organised and consists of types, traits and habits, with types the most abstract construct. Each type is based on a set of observed correlations among various traits; each trait is inferred from correlations among habitual responses; habitual responses are based on specific observable responses. The Eysenck Personality Questionnaire (EPQ) (Eysenck & Eysenck, 1975) was constructed to measure the three primary types. It contains a lie scale intended to measure subjects' tendencies to 'fake good' during completion and has evolved to the EPQ-R (Eysenck & Eysenck, 1991). Eysenck emphasised that both neuroticism and psychoticism are normal personality traits even though these might predispose to neurotic and psychotic disorders respectively in a few individuals (Hampson, 1992).

Eysenck's formulations of the biological bases of his personality dimensions provide a useful link to the biological basis of stress. His theory of physiological arousal proposed that differences in behaviour of introverts and extraverts and stability/neuroticism may be influenced substantially by genetic factors (Eysenck & Eysenck, 1976; McCrae et al, 2000). Neuroticism, Eysenck claimed, is related to the lability of the autonomic nervous system, extraversion to the excitability of the ascending reticular activating system (ARAS), and psychoticism to the androgen level of the individual.

Eysenck proposed that people high in **neuroticism** (high innate emotionality) have lower thresholds for activity in the visceral brain and greater responsivity of the sympathetic nervous system than more emotionally stable individuals. They overreact to even mild forms of stimulation. The greater responsivity of neurotics is most obvious under relatively stressful conditions when the emotional reaction (fear, anxiety, depression) engendered by stress may interfere with functioning and performance (Eysenck & Eysenck, 1985).

In Eysenck's theory, individual differences in **extraversion** reflect individual differences in reticular formation activity. Introverts are assumed to experience innately higher levels of arousal than extraverts and consequently to be more sensitive to stimulation and stress. Introverts are chronically over-aroused and in need of peace and quiet to maintain an optimal level of performance. Extraverts according to Eysenck are chronically under-aroused and in need of external stimulation to bring them to an optimal level of performance.

The strong genetic base of Eysenck's primary personality types is supported by evidence from numerous studies (Campbell & Hawley, 1982; Furnham & Bradley, 1997); types appear universal across cultures, and stable within given individuals over time and a variety of

experiences. There is only rudimentary evidence to support Eysenck's association between hormones and psychoticism.

3.3.1 The EPQ and Stress

There is considerable research evidence linking personality factors, particularly neuroticism, measured by the Eysenck Personality Questionnaire and EPQ-R to stress. For example, personality factors rather than environmental factors play a causal role in the generation of a stress reactions in commercial airline pilots (Evans, 1986). Neuroticism is associated with commuter driver stress (Langford & Glendon, 2002). Life events and neuroticism are significantly related with distress symptoms for Egyptian executive managers (Smidi, 1999). Personality characteristics, particularly neuroticism, are associated with a tendency towards tension headaches caused by stress (Rangaswami, 1983). Neuroticism is associated with perfectionism, high life stress and trait anxiety in undergraduates (Flett et al, 1989). Research indicates a negative relationship between neuroticism and cancer, and a positive relationship between neuroticism, stress related symptoms and cardiovascular symptoms (Eysenck, 1988; Wistow et al, 1990). Postmenopausal women with vasomotor symptoms show lower stress coping and significantly higher neuroticism scores than a comparison group without symptoms (Nedstrand et al, 1998).

3.3.2 Evaluation

Eysenck's personality model is strongly supported by a history of dedicated research, rigorous scientific standards, and great emphasis on conceptual clarity and measurement. His theory is comprehensive with a strong physiological base addressing a broad range of normal and abnormal phenomena. Considerable empirical support exists for Eysenck's arousal theory but measurement difficulties remain. Critics of Eysenck argue that his theory is too economical - three types cannot adequately describe personality functioning - and lacks an explicit and independent situational taxonomy. Although Eysenck's higher order dimensions are intended to be statistically uncorrelated there are slight positive correlations, especially among male subjects, between psychoticism and the other two scales (Eysenck & Eysenck, 1991). The terms neuroticism and psychoticism have pejorative connotations and may be replaced with emotionality and tough mindedness versus superego control, respectively (Ryckman, 2000).

3.4 Cattell's Structure-Based Systems Theory of Personality

Whilst Eysenck advocates three personality dimensions, Raymond Cattell (1946) postulates that the basic structure of personality is made up of at least 23 relatively stable and predictable characteristics or traits. Cattell considers personality as a system in relation to the environment and seeks to explain the transactions between them that produce change in a person (Ryckman, 2000). Cattell (1965:117) defines personality as 'that which tells what (a person) will do when

placed in a given situation' i.e. the behavioural response of a person is a function of the situation confronted and the individual's personality. His research addresses aspects of human functioning often ignored by other personality theories e.g. ability, emotion, motivation and learning (Cattell & Child, 1975).

Cattell (1946) started with a large number of surface variables (surface traits) and sought to reduce them to a few common source factors (fundamental primary personality factors). He examined a lexicon of 4,500 trait names from the English language (Allport & Odbert, 1936) and reduced them to 46 surface traits comprising the whole personality sphere (Cattell and Kline, 1977:30). Subsequently, 23 major source traits (Cattell 1965) were identified using factor analysis of data derived from observer ratings, questionnaires and objective tests. The sixteen most robust of these dimensions are measured by the Sixteen-Personality Factor Questionnaire (16PF: Cattell, Eber & Tatsuoka, 1970). The 16PF has practical application in occupational settings as a tool for analysing behaviour, recruitment, development and team building. It has been utilised for vocational and relationship counselling and assessment of therapeutic growth, and for research purposes rather than diagnosis (Ryckman, 2000).

Although the 16PF has good predictive validity, doubts remain about the construct validity of the 16PF scales. Several investigators (Barrett & Kline, 1982; Matthews, 1989) were unable to recover Cattell's primary factors from factor analysis of the 16PF. The revised 16PF, the 16PF5 (Conn & Rieke, 1994), has improved internal consistency and assesses each individual's personality against 16 key factors: **warmth, reasoning, emotional stability, dominance, social boldness, liveliness, rule consciousness, sensitivity, vigilance, abstractedness, privateness, apprehension, openness to change, self reliance, perfectionism, and tension.**

In contrast to Eysenck, Cattell regarded the abnormal personality as qualitatively different from the normal personality (Cattell, 1973). Although the 16PF is able to discriminate between neurotics and normals, additional factors are needed for discriminating psychotics. Cattell and Kline (1977) subsequently derived 12 further factors measuring psychopathology and combined them in the Clinical Analysis Questionnaire (CAQ).

3.4.1 The 16PF and Stress

Several studies have utilised the 16PF in stress research. Numerous factor analysis studies by Cattell (1950) have found neurotics to be lower in ego strength or emotional stability. Neurotics are also easily overcome by their emotions, subject to moods, highly anxious, and cannot adjust their behaviour to the realities of a given situation (Meyer, 1993), suggesting that they may be more stress-prone individuals. An exploration of stress in police officers found significant correlations between the psychological strain scale and ego strength and rebelliousness factors (Cimbura, 2000). An investigation of the relationship between personality factors and adaption

to stress in a military situation found that those who dropped out scored lower than remainders on the factor reflecting group dependence (Herrmann et al, 1977). Bonaguido et al, (1997) found that patients with myocardial infarction are characterised by difficulties in communication, emotional expression, and adaptation to stress, and by a tendency to strong self-control and poor attention to internal feelings.

3.4.2 Evaluation

Cattell's theory of personality is comprehensive and based on precise measurement and testability. He attempted to remedy a major criticism of trait theories - that they neglect the role of environment in predicting behaviour. His theory addresses a wide range of diverse phenomena, both normal and abnormal, and seeks to account for both sociological and sociocultural factors that influence behaviour. There is considerable empirical support for his basic concepts. Despite this, his critics have argued that his data are fraught with ambiguities and subjectivity in interpreting the meaning of factors and labelling them. The language of the theory is often technical and forbidding, using neologisms such as 'alaxia', 'praxernia' (Ryckman, 2000).

There is some correspondence between the 16PF secondaries and the personality factors of the five-factor model, sometimes called the 'Big Five.'

3.5 Costa And McCrae's Five Factor Model

There is growing consensus that a five factor model may offer a comprehensive account of human personality differences and a unified framework for trait research. This framework has considerable potential for investigating the relationship between personality factors and stress. Although no single set of identical dimensions is agreed by all researchers (De Raad & Perugini, 2002), the five broad dimensions generally accepted are: 1. **Neuroticism** (or conversely emotional stability, calm, secure, non-anxious), 2. **Extraversion** (sociable, talkative, assertive, ambitious, active), 3. **Openness** (imaginative, artistically sensitive, intellectual), 4. **Agreeableness** (good natured, cooperative, trusting), and 5. **Conscientious** (responsible, dependable, organised, persistent, achievement orientated). Of the five, openness is the most controversial (De Raad & Van Heck, 1994) and liable to misinterpretation. The factor structures of almost all personality inventories can be reproduced from knowing their associations with the five factors (O'Connor, 2002). Costa and McCrae (1987, 1990, 1994) have demonstrated the stability of individual profiles on the Big Five over extended periods of time and conclude that personality is quite stable after age 30 years. They have evidence of cross cultural similarities in the aging trajectories of the five factors and assert that the five factors are a human universal, with the traits being primarily genetically influenced (McCrae & Costa, 1997; McCrae et al, 1999; McCrae et al, 2000). Their model forms the basis of a widely used measurement scale, the NEO-Personality Inventory–Revised (NEO-PI-R: Costa & McCrae, 1992).

Psychometric criticisms of the five factor model consider that: 1. The big five like factors obtained by different investigators are not necessarily equivalent, 2. Five broad trait factors may be necessary but not sufficient, and 3. Five factors may be too many (De Raad & Perugini, 2002). Eysenck's three dimensions and the Big Five may reflect different levels of description and so are not fundamentally incompatible. The Big Five factor model is useful primarily for descriptive and general predictive purposes (Matthews et al, 2003).

With respect to vulnerability to stress, Trull and Sher (1994) investigated the role of the Big Five in various anxiety and mood disorders in a non clinical sample. Using diagnostic interviews and the NEO-PI-R, they found that individuals classified as having suffered from a disorder differed in personality from those who had not. Sufferers showed a clear general pattern of high Neuroticism, together with low Extraversion, low Conscientiousness, low Agreeableness and high Orderliness. Low Agreeableness and low Conscientiousness may be associated with difficulties in social functioning whereas the high Openness person may be oversensitive.

3.6 Other Personality Measures And Stress

Several other questionnaires attempt to assess primary traits comprehensively and have various degrees of usefulness with regard to stress research. Perhaps the most popular is the **California Personality Inventory** (CPI: Gough, 1987; Gough & Bradley, 1996), which assesses twenty traits with moderately good reliability. It is widely used in occupational career development and personnel selection (Matthews et al, 2003), and to predict managerial effectiveness, graduate and therapeutic outcomes (Groth-Marnat, 1990). With respect to measuring stress vulnerability, the CPI reveals that persons with low Sociability, with Responsibility and Self-control significantly higher, are likely to be defensive and susceptible to the effects of situational stress (Webb et al, 1981).

The CPI focuses on assessing, understanding and predicting interpersonal behaviour within normal populations. It avoids complex diagnostic nomenclature and emphasises practical descriptions commonly used across cultures. Against the use of the CPI in stress research is its length (462 items) and the need for informed interpretation of the findings. It was constructed on an empirical or 'criterion keyed' basis i.e. items were chosen on the basis of their ability to discriminate criterion groups, and its construct validity is low (Matthews, 2003). Many of the scales are highly correlated, conceptually similar and have extensive item overlap. It has limited validity studies in clinical settings.

The **Minnesota Multiphasic Personality Inventory** (MMPI) (Humm, 1942) and more recently the MMPI-2 (370 items), is a widely used clinical personality inventory from which the CPI

was derived. The MMPI is clearly superior for the evaluation of pathology. The limitations for the original MMPI are numerous and include moderately adequate reliability, problems related to scale construction, excessive length, offensive items, limited usefulness for normal populations, misleading or pejorative labels for scales, inadequacy of the original normative sample, and the necessity of considering demographic variables. A considerable degree of psychological and clinical sophistication is necessary to interpret the MMPI and MMPI-2. The limitations of the MMPI are balanced by the extensive research relating to the meanings of the different scales and relationships among scales (Groth-Marnat, 1990).

With respect to its limitations in stress research, the MMPI was designed for use on clinical groups and is therefore not particularly suitable for use on normal populations. The interpretation of scores within 'normal ranges' is uncertain and should be approached with extreme caution (Groth-Marnat, 1990).

3.7 Neuroticism And Stress Vulnerability

There is abundant evidence to show that the single most important Big Five personality factor or trait that influences stress vulnerability is neuroticism (N) (Matthews et al, 2003). High N individuals show a range of elevated stress responses and outcomes in response to the hassles of everyday life, including negative mood, distress following adverse life events and behavioural disturbances (Mohamed, 1996; Diener et al, 1999; Matthews et al, 2000). N also relates to lower life satisfaction and subjective well-being (DeNeve & Cooper, 1998) and to job dissatisfaction and indices of job strain (Tokar et al, 1998). Bolger and Schilling (1991) found that high N subjects report higher emotional distress than N subjects following stressful events such as work overload or financial troubles, and they are more prone to cognitive failure. Neuroticism is also associated with difficulties in interpersonal interaction and poorer quality social relationships (Berry et al, 2000). The correlation between N and symptom level is highly robust (Levanson et al, 1988).

Organisational studies conclude that high N is the strongest personality predictor of stress response in the workplace (Furnham, 1992; Tokar et al, 1998) including distress and worry (Matthews, Campbell et al, 2002) and self-reported health complaints (Mak & Mueller, 2001). High N is also associated with high levels of work/family conflict due to both work and family stress (Stoeva et al, 2002). N is the broad personality trait most closely related to job dissatisfaction (Tokar et al, 1998; Judge & Bono, 2001). In studies of mental health problems in young doctors, it was found that neuroticism, overwork, emotional pressure, and perceived stress in and outside of work were predictive of symptoms of anxiety and depression early on in the doctors' careers (Tyssen & Vaglum, 2002).

Most research on stress and personality is correlational in nature, raising the issue of whether high N is truly a causative factor of stress outcomes; increased N may be a concomitant of stress with no direct causal influence. However, longitudinal studies of life stress suggest that N is indeed a casual factor both directly and through increasing exposure to adverse events. For clinical disorders the picture is more complex. It seems that high N is indeed a risk factor for emotional disorder, but N also becomes elevated as a consequence of the disorder, showing a reciprocal relationship between N and mental illness (Matthews et al, 2003).

It is also difficult to say whether neuroticism operates primarily as a general biasing factor (a mediator[3]) or as a moderator[4] factor in the stress process. Evidence can be found in support of both points of view. Matthews et al (2003) suggest that high N relates to various biases, such as negative self-appraisal and use of self-critical, emotion-focused coping that may feed into greater levels of stress outcome. Emotional stability, on the other hand, may act as a moderator variable of the stress process that shields or buffers the person from the effects of adverse life events. Other personality factors have also been implicated as stress buffering factors, including extraversion, hardiness, internal locus of control, optimism and low dispositional self-consciousness. Social support and spirituality are examples of stress buffering factors that are not traits but are linked to personality.

Research on cognitive risk factors for mental disorder confirms this view of neuroticism as a latent risk factor for mental disorder (Nolen-Hocksema, 2000). Pathology is most likely when the person develops maladaptive cycles of cognition that perpetuate negative self beliefs (e.g. rumination), or maladaptive cycles of interaction with the outside world (e.g. social withdrawal) (Harkness et al, 2002).

3.8 Negative Affectivity

Another variable that strongly influences stress vulnerability is negative affectivity (NA). Conceived as a higher order construct that subsumes neuroticism, trait anxiety, low self-esteem and other emotion-related personality variables, negative affectivity reflects a relatively stable predisposition to experience low self esteem and negative emotional states (Watson & Clark, 1984) regardless of the situation. The converse of NA, positive affectivity (PA), or the disposition to experience positive emotional states, has been found to be inversely related to

[3] Mediators are variables that provide an intervening link between one variable and another e.g. stressor and strain, and are involved in the actual transmission of influence e.g. cognitive appraisals. In contrast to moderator variables, a mediating variable is one that 'accounts for the relation between the predictor and the criterion' (Baron & Kenny, 1986:1176). From a transactional perspective, mediator variables are not separate antecedent entities, but are actually generated during the stressful encounter and transmit the effects of stress exposure. They are impacted upon by potential stressors and, in turn, impact upon the outcome in terms of enhancing or diminishing changes in health status (Bartlett, 1998).

[4] A moderator of a particular relationship e.g. between job stressor and health, is a variable 'that affects the direction and/or strength of the relationship between an independent or predictor variable and a dependent or criterion variable' (Baron & Kenny, 1986:1174). A moderator is therefore some third factor e.g. support, that exerts an influence on the zero order correlation between two variables (Cooper et al, 2001).

psychological and somatic complaints. The measurement of NA has been undertaken using various scales for trait anxiety and neuroticism and with the Positive and Negative Affect Schedule (PANAS) (Watson et al, 1988; Huebner and Dew, 1995; Torsten et al, 2002). NA tends to increase individuals' susceptibility to the effects of stress-inducing environments (Parkes, 1990) and to life stressors (Bolger & Schilling, 1991). High NA individuals are more inclined to experience psychological strain and other negative outcomes in their work setting (Semmer, 1996). NA also correlates with stress related somatic complaints such as the cardiovascular disorder, angina pectoris (Schaubroeck & Ganster, 1991).

NA has been considered a methodological nuisance and confounding factor that biases self report measures of stressors and strain, making any observed relationship artefactual (Brief et al, 1988). This view was supported by Parkes (1990) who noted that variance in strain explained by work environment factors was reduced after controlling for NA, although the stressor-strain relationship remained statistically significant. In contrast, Jex and Spector (1996) found that NA accounted for little variance in the association between stressors and psychological strain. Schaubroeck et al (1992), using confirmatory factor analysis reported that, although NA might significantly attenuate the effects of job stressors, there was no reliable evidence that it measures a factor in common with indexes or work stressors. They also suggested that Watson and Pennebaker's (1989) symptom perception hypothesis (that high NA individuals are more prone to report symptoms of strain) provides a better explanation than the confounding variable hypothesis for observed relationships between NA and strain.

The general consensus is that although negative affectivity does inflate stressor strain correlations, the magnitude of this effect is not great enough to change the substantive conclusions of occupational stress research based on self-report measures (Jex et al, 2002). The observed relationship of NA with stressors and strains is complex. There is support for both mediational and moderating processes in this relationship, as outlined by Spector et al (2000) below:

1. High NA individuals tend to have a negative 'view of the world' and may perceive and hence report work situations as highly stressful. NA directly influences the perception of stressors rather than the relationship between stressors and strain (Watson & Pennebaker, 1989).
2. High NA individuals are more sensitive to the impact of stressors and may therefore exhibit a heightened stress response. The effect of NA is direct rather than moderating, and on strain rather than stressors.
3. High NA individuals are more likely to place themselves in more stressful work environments (Spector, Jex & Chen, 1995) but an explanation for this differential selection mechanism is not clear.

4. High NA individuals may create stressors (Spector et al, 2000) as their negative feelings and behaviours induce negative reactions from colleagues and lead to discord in social and work environments.
5. Transitory moods (anxiety, upset, frustration) may result in workers reporting higher levels of strain as well as elevated NA.
6. Finally, consistent exposure to stressors may itself induce high levels of negativity or exacerbate existing levels of NA.

This model highlights the shift from viewing NA only as a methodological nuisance to the recognition that high NA may increase stress vulnerability and influence reactions to stress.

3.9 Type A Behaviour Pattern

Considerable attention has been focused on Type A Behaviour Pattern (TABP) as a predictor of strain and strain related outcomes. The concept was originally developed by cardiologists (Friedman & Rosenman, 1959) to describe people who were more prone to suffer from coronary heart disease (CHD).

Type A Behaviour Pattern is characterised by a chronic sense of time urgency, impatience, hostility, and an aggressive and competitive drive for achievement, polyphasic activity and explosive speech patterns. Type B individuals are defined by default as people who do not exhibit these behaviours. Type A individuals are engaged in a 'chronic struggle to obtain an unlimited number of poorly defined things..... in the shortest time possible (Jenkins et al, 1979:3). Paradoxically they appear to be well organised, self confident and self controlled (Rosenman, 1983). Type A Behaviour Pattern may lead to both positive and negative outcomes. Type As may experience high levels of personal accomplishment and reward at work. However, achievement may come at personal cost in terms of higher levels of psychological strain, longer-term somatic complaints, work/life imbalance, and incompatible relationships with work colleagues (Cooper et al, 2001).

Several models treat Type A behaviour as a stable personality trait including: Friedman and Rosenman's (1974) conceptualisation of Type A Behaviour as a style of reacting to challenging situations; Glass's (1977) model relating to uncontrollability; Scherwitz and Canick's (1988) theory based on self involvement; and Price's (1982) complex construction of personal and social reality. The main Type A assessments are through structured interviews (SI) (Rosenman, 1978), the Bortner Type A scales (Deary et al, 1994) and the Jenkins Activity Survey (JAS: May & Kline, 1987).

Inconsistent findings have led researchers to question the validity of studying global TABP as a strategy for identifying coronary prone persons (Moyle & Parkes, 1999; Jamal, 1999). The notion that Type A is a composite appears to be supported by psychometric studies of the main

Type A measures, some of which are associated with neuroticism and extraversion (Deary et al, 1991). Research has revealed that **'anger in'** and **hostility** appear to be the main predictors or toxic elements of Type A as far as coronary heart disease (CHD) is concerned (Helmer et al, 1991; Johnston, 1993; Myrtek, 2001). Schaubroeck and Ganster (1991) claim a role for the triad of anger, hostility and aggression (known as AHA!) in CHD.

3.9.1 Anger & Stress

Spielberger et al (1983) are interested in how anger, as an element of Type A personality, may increase vulnerability to chronically elevated blood pressure or hypertension. They constructed the State-Trait Anger Scale (STAS) to measure anger as an emotional state that varies in intensity, and individual differences in anger proneness as a personality trait. As research into anger and stress has progressed, the critical importance of differentiating between angry feelings and how that anger is expressed has become increasingly apparent (Spielberger et al, 1985; Greenglass, 1996; Julkunen, 1996). The most consistent criterion validity has been obtained with the addition of a trait-like measure, Anger Expression-In, which relates to the frequency of experiencing, but not expressing angry feelings (Spielberger et al, 1991). Anger-In tends to be most closely associated with hypertension and other CHD variables. Anger Expression–out, the frequency of aggressive behaviours motivated by angry feelings, does not seem to predict hypertension. Few studies have attempted to link trait anger to perceptions of job stressors. Spector (1999) reports such a link, with high anger individuals perceiving more job stressors associated with organisational constraints.

A more recent questionnaire, the State-Trait Anger Expression Inventory (STAXI; STAXI-2): Forgays, Forgays & Spielberger, 1997; Spielberger et al, 1999) discriminates three state anger factors: feeling angry (similar to state anger per se); feel like expressing anger – verbal (e.g. feel like screaming), and feel like expressing anger – physical (e.g. feel like hitting someone). It is expected that high scores on feeling angry coupled with low scores on the two expressions of anger states should be related to hypertension. Spielberger et al (1995) and Forgays et al (1998) found that males scored significantly higher than females on the trait anger scale and on the anger in and anger out subscales. Thomas (1989) did not find any gender differences in either anger suppression or expression.

The association between Type A behaviour and psychophysiological reactivity to stress is greater when the relationship is examined separately for hostility and anger, particularly anger that is suppressed rather than expressed, with those individuals who suppress their anger showing nearly twice the mortality risk of those who express it (Julius et al, 1986; Contrada, 1989). Thus it is not just the angry state but how it is expressed that may be important in mediating personality effects on health (Matthews et al, 2003). In addition, Spielberger's work

on anger and anxiety provides a fine-grained model of specific emotions that may support Lazarus' (1999) transactional model of stress and emotion.

Personality Variables as Stress Resilience Factors

3.10 Hardiness

The construct of 'hardiness' is concerned with a variety of **stress resistance resources** available to an individual that can moderate the effects of environmental stressors on their health and well-being. Kobasa (1979) conceptualised hardiness as a constellation of three personality characteristics – control, commitment and challenge, in an attempt to ascertain the personality characteristics that help some people stay healthy (despite high levels of stress) whilst others became ill. The **control** (vs. powerlessness) component of hardiness relates to a person's belief in his or her ability to influence or manage life events. **Commitment** (vs. alienation) refers to active engagement in daily living and having a clear purpose in life. **Challenge** (vs. threat) refers to a person's view of change as a normal part of life and an opportunity for growth and development (Maddi & Kobasa, 1984).

Kobasa (1982) found that hardy persons tend to report fewer illnesses and higher levels of well-being, although some studies have failed to replicate these findings (Benishek & Lopez, 1997). Evidence to support both direct and mediating effects of hardiness on health has been found in a variety of studies (Jennings & Staggers, 1994; Tartasky, 1993). Although the appeal of this concept is apparent, at this point there is a lack of substantive evidence that hardiness per se demonstrates a consistent moderating effect on either psychological or physical health. Kobasa's work has been criticised regarding several conceptual and methodological issues including: the question of the applicability of the generic concept of hardiness (developed primarily from samples of male executives) to women; whether hardiness is a single concept or three distinct concepts; reliance on self-report measures of health status; and inconsistency in measurement and scoring. A tighter specification of the theoretical construct and a more systematic approach to its measurement are needed to enhance our understanding of the hardiness construct (Cooper et al, 2001).

3.11 Self-Efficacy

Bandura (1977, 1986, 1997) defines self-efficacy as a conviction or beliefs about one's capabilities to organise and execute courses of action needed to exercise control over tasks, demands or events that affect our lives. The concept is derived from social cognitive theory and is increasingly recognised as a personal resource that helps to reduce the impact of stress upon health. High self-efficacy can exert a direct positive effect on health through its influence upon health behaviours (Siela & Wieseke, 2000). It may also act as a mediator of the stress-health relationship through its effects on cognitive activities that influence the choice of coping

strategies and adaption in stressful work situations (Ganster & Schaubroeck, 1995). Conversely, low self-efficacy is seen as a vulnerability factor (Jerusalem & Schwarzer, 1992) associated with depression, mental frailty and stress. Self-efficacy overlaps with the constructs of control, mastery and dispositional optimism with regard to positive outcome expectancies.

3.12 Sense Of Coherence

Sense of coherence is a major construct in the 'Salutogenesis' model developed by Antonovsky (1979) in his search for the 'origins of health.' It seeks to answer the question: why do some people stay healthy despite experiencing stress? Sense of Coherence (SOC) is put forward as an enduring view of the world and a personality disposition characterised by the degree to which a person expects their world to be: **comprehensible, manageable** and **meaningful.** A recursive relationship is proposed between SOC and Generalised Resistance Resources, which are any characteristics of the person, group or environment that can facilitate effective tension management. Poorly managed stressors lead to a state of tension whilst poorly managed tension leads to stress and negative placement on the health-ease-disease continuum (Horsburgh, 2000). This is a cognitive model based partly on the concept of appraisal (Lazarus & Folkman, 1984). A person with a strong SOC is more likely to appraise a stimulus as a non-stressor rather than as a potential threat.

There is conflicting evidence on how the SOC exerts its effects on health. Bishop (1993) found a direct effect of SOC on health, such that people with high sense of coherence would experience a better state of health. SOC may also exert its effect on health by buffering[5] against life stress (Flannery & Flannery, 1990). Hawley et al (1992) suggest that SOC measures the other side of psychological distress. This model, based on human strengths rather than weaknesses, intuitively makes sense and has considerable appeal. Issues of empirical validity, measurement and a need to differentiate the SOC construct from hardiness, self-efficacy, self-transcendence and life satisfaction, limit its usefulness.

3.13 Dispositional Optimism

This construct refers to a generalised expectation that good things will happen, or beliefs that the probable outcome will be positive (Scheir & Carver, 1987). It is similar to lay views of positive thinking and emphasises the role of outcome expectancies as a determinant of the conflict between striving to achieve a goal and giving up (Bartlettt, 1998). Scheir and Carver's review (1992) suggests that optimism is beneficial for both physical and psychological well-being and that these effects are mediated by coping behaviours. Several studies have illustrated

[5] Both moderator and mediator variables affect the degree of impact a stressful event exerts upon health status. If they reduce this impact they are said to be 'protective.' Protective moderating variables are also referred to as 'buffering variables' serving to cushion the impact of stressful events (Bartlett 1998).

that optimists have more positive appraisals of stressors and engage different strategies for coping with stressful situations (Chang, 1998). Cohen and Edwards (1989) indicate that optimism, along with constructs of personal control, self-esteem or self-efficacy, might function as a 'superordinate' moderator, reflecting the essence of other dispositional factors. Given this view it is surprising that there has not been more systematic exploration of the optimism construct in studies of job-related strain (Cooper et al, 2001).

Situational Moderators of Stress

3.14 Perceived Control Over The Environment

There is a growing body of support for the view that appropriate levels of control over the environment are important for workers' well-being and even their physical health (Kristensen, 1996). For Cooper et al (2001), '*perceived* control' is a **situational variable** because it reflects a person's perceptions of their specific work environments rather than cross-situational dispositional beliefs. Perceived autonomy or control has more to do with environmental characteristics (i.e. whether the situation permits individual control) than with global beliefs about control, as in generalised 'Locus of Control' (Rotter, 1966).

Most research on the stress-moderating effects of control has been based on Karasek's (1979) job-demands-control model. Karasek's fundamental proposition is that although **excessive work demands** may clearly be associated with higher levels of mental and physical ill health, such as cardiovascular disease (Kristensen, 1996), the impact of these demands may be offset by the perception that one has control over important aspects of the work environment. Evidence of control functioning as a moderator of the relationship between job demand (stressors) and a person's affective and physiological outcomes (strains) is not clear-cut. Karasek originally hypothesised that high demands would only be associated with ill health in those with low decision latitude. However, the results of the Whitehall II study of work related factors and ill health (Stansfield et al 2000) suggest that high job demands and low decision latitude have independent effects on health. The amount of **information** provided for employees on job procedures, organisational changes and events may attenuate the moderating effects of control (Jimmieson & Terry, 1998). Clearer specification of the control variable is needed to obtain the expected interaction with job demands (Wong, 1992).

Social Moderators Of Stress

3.15 Support

The quality of social relationships that people have at work has consistently been linked to job stress (Nelson & Burke, 2002). Social support at work can be viewed as a resource that both enhances performance, job satisfaction and well-being (Perrewe & Carlson, 2002) and reduces

the effect of work-family conflict. Membership of social networks can provide us with assistance in problem-solving and reassurance of worth and can support a 'repertoire of satisfactory social identities' that are critical to our self-concept and self-esteem (Hirsch, 1981:163). These resources help to prevent demoralisation in times of stress, increase our options when confronting change and loss, and facilitate a more active style of problem-solving (Antonucci & Depner, 1982). However, providing support when one is not receiving it in return may be a source of strain (Wahler, 1980).

Clear evidence exists for the association between lack of social support and job stress, especially lack of support from supervisors. The Whitehall II study (Stansfield et al, 2000) found that low social support at work was associated with poor mental health, poor health functioning, and increased sickness absence. High social support at work had a protective (buffering) effect associated with reduced risk of sickness absence. The Bristol study found that lack of workplace social support was associated with perceived stress (Smith et al, 2000). Turnage and Spielberger (1991) found that managers experienced job pressures such as lack of support more often than professionals/engineers, but attributed less stress intensity to those pressures.

3.16 Defining Social Support

Social support has been conceptualised and measured in many ways but it is generally perceived to have two primary features: **structural** and **functional**. Structural aspects include partnership status, organisational membership, and number of social networks and contacts (Bartlett 1998). Functional aspects involve the nature and qualities of social relationships. House (1981) identified four main functions of workplace support as providing an employee with **emotional concern, instrumental aid, information** and **appraisal.**

Despite controversy over exactly what constitutes social support and how it is involved in the stress process, it is generally accepted that social support may exert an influence on stressor-strain relationships in three distinct ways: through main, mediating and moderating (buffering) mechanisms (Underwood, 2000). Main effects are evident where increases in support are directly associated with reduced strain, irrespective of the number or intensity of stressors that the individual encounters. Moderating or buffering effects may be found where social support acts as a stress resistance resource attenuating the correlation between stressors and strains, although evidence supporting this effect is inconclusive (Winnubst & Schabracq, 1996). Social support may also act as a mediator of the relationship between stressors, coping and health outcomes, whereby stressors spur individuals to mobilise their support resources, which, in turn, help to reduce the amount of strain experienced (Runtz & Schallow, 1997).

3.17 Gender Differences & Workplace Support

Reviews of social support (Belle, 1987; Greenglass, 2002) suggest that there are pervasive gender differences in the ways men and women construct their networks and utilise them for support, and that these differences have consequences for their well-being in stressful work environments. Women tend to mobilise more varied social supports (friends, relatives, formal and informal groups) in the workplace and home than do men. Women also show a greater propensity to mobilise social support in times of stressful life events. Greenglass (1993) observed that, for women, workplace support from a supervisor is positively associated with the use of preventative and instrumental coping, sharing concerns and seeking advice. Support from family and friends discourages women from a reliance on palliative strategies. Research suggests that women may receive more social support from co-workers than do men; however, women and men receive similar levels of support from their supervisors (Parasuraman & Greenhaus, 1994). For men, support from a supervisor is found to predict preventative coping. What is most striking about men's mobilization of support is that it is heavily focused on one main support provider – the wife (Belle, 1987).

3.18 Seeking Help

Burke's (2002) review of men, masculinity and health observed that, since asking for help is associated with femininity in our culture, many men deny their physical problems and are rigidly self-sufficient. In line with traditional gender stereotypes, men tend to regard help-seeking as a threat to their competence or independence, whilst women may view help-seeking as a means of creating or sustaining interpersonal relationships, and thus a desirable experience in its own right (De Paulo, 1982). Men may also refrain from help-seeking because of explicit social sanctions against such behaviour, particularly in the workplace. Weiss (1985) found that occupational settings seemed to prohibit or punish the display of emotions other than anger, thus inhibiting emotional support seeking.

With respect to the present study, the role of social support in the managers' stress-coping framework will be investigated using both quantitative and qualitative methodologies. It is important to consider both the managers' subjective perceptions and objective indexes of support (Cooper et al, 2001). Gender issues concerning the nature of support will also be explored. In addition, the study will investigate the type and nature of support provided and used, together with an exploration of the value, frequency, context, availability, source and focus of support in the managers' working lives.

3.19 Summary of Individual Differences and Job Stress

It has become increasingly clear that reactions under stress cannot be predicted or understood without reference to personality, situational and social characteristics and the processes that account for individual differences in the ways people respond to potential stressors. Solid evidence abounds to show that a large number of environmental, social and dispositional variables may influence a person's vulnerability to stress and associated health outcomes. Although a broad range of questionnaires exist to measure these phenomena, the correlational nature of many of the findings raises issues of causation and its direction. Difficulties remain in establishing the nature of the relationship between individual difference variables, stress and health, including measurement and the distinction between subjectively reported symptoms and objective signs of strain or ill health.

According to Cooper et al (2001:151), it is important that individual differences (as potential moderator variables) are investigated within the framework of the transactional model of stress rather than as peripheral issues that may or may not impinge upon stress-coping mechanisms. Within the transactional model, the term 'relational meaning' (Lazarus, 1999:13) allows us to understand why individual differences are ubiquitous in human thought, emotion and action. Despite sharing much with other people and social groups, each of us also responds distinctively to the same environmental stimulus, especially when its meaning is ambiguous. On the basis of our unique relationship with that environment, we react as individual persons who differ in our most important goals, beliefs and personal resources.

A qualitative research methodology privileges the search for meaning, understanding or *verstehen* rather than abstract, universal laws (Henwood & Pidgeon, 1995), and this approach takes into account individual appraisals, meanings and activities that capture the transactional nature of stress and stress as a process. In the present study, using a qualitative interview method to explore individual differences that influence job stress will hopefully gain access and sensitivity to the healthcare managers own understandings of stress as seen from their local frames of reference, and from their own socially-situated personal worlds.

Chapter 4: Coping

4.1 Introduction

According to the transactional model of stress, individual differences in health and well-being can only be fully understood if the researcher takes into account variations in people's ability to cope with potential stressors. How a person copes is dependent on both the characteristics of the person - their stress resistance resources - and the nature of their specific situation. Accordingly, in the present study, in order to have a greater understanding of the differential impact of potential job stressors on the healthcare managers' well-being, we need to investigate some of the coping mechanisms that the healthcare managers may utilise within their specific hospital work environment. In addition, this section draws attention to some of the problems of defining coping, gender differences, and methodological issues that surround the study of coping in the workplace.

4.2 Definitions Of Coping

Lazarus & Folkman (1984) define coping as the **process** of managing external or internal demands that are appraised as taxing or exceeding the resources of the person. Coping facilitates the maintenance of equilibrium and homeostasis - central to the transactional model of stress. Coping may include efforts (thoughts or behaviours) to minimise, avoid, tolerate, change or accept a stressful situation as the person attempts to master or manage his or her environment (Lyon & Hill-Rice, 2000). The emphasis is on coping as a process - neither a trait nor an outcome, and coping efforts that can be conceptually distinguished from the results (success or failure) of those efforts. Central to this definition of coping is the integrating role of cognitive appraisals, implying that it is important to access the thoughts and behaviours of the managers in this study.

4.3 Classification Of Coping By Function

There is no clear consensus on how best to classify coping strategies. Ferguson and Cox (1997) suggest that coping in work settings incorporates four major **functions** including: emotional regulation, reappraisal, approach, and avoidance. Two commonly used dimensions of coping are problem-focused and emotion-focused coping. In problem-focused coping, we gather relevant information and mobilize actions to address the stressful circumstances. Emotion-focused coping is aimed at regulating one's emotional reaction to the stressful event, for example, by avoiding thinking about the threat or reappraising it, without necessarily changing the realities of the situation (Latack, Kinicki, & Prussia, 1995).

4.3.1 Coping Effectiveness: Emotion-Focused Or Problem-Focused Coping?

The literature on the relative impact of emotion-focused or problem-focused coping tends to suggest that, by definition, an instrumental focus is more effective in terms of healthy functioning than emotion-focused coping (Greenglass, 1988). There is some evidence that emotion-focused coping increases emotional distress and is positively related to depression. (Vitaliano et al, 1985). However, people who rely rigidly on problem-focused coping and continue to struggle to change conditions that are **outside their control** and cannot be changed, may be far more troubled in the long term than those who accept the reality of the situation and utilise emotion-focused coping (Collins et al, 1983). Lazarus (1999) argues that in virtually all stressful encounters a person draws on both problem-focused and emotion-focused coping strategies to achieve the best adaptational outcome.

4.4 Gender Differences In Coping

From the perspective of gender differences in coping, findings have been inconclusive. Vingerhoets and Van Heck (1990:215) found that, while men prefer problem-focused coping strategies, planned and rational actions, positive thinking, personal growth, humour, day-dreaming and fantasies; women prefer emotion-focused coping, self-blame, emotional expression, social support-seeking and wishful thinking. Billings and Moos (1981) found that women, more than men, use avoidance coping. Hamilton & Fagot (1988) found that women rely on expressive or emotion-focused coping strategies, while men prefer an instrumental or problem-focused approach.

In much of the literature there is an assumption that since instrumentality is thought to be linked to improved well-being (Patterson & McCubbin, 1984) and men are thought to employ a more instrumental approach to coping (Hamilton & Fagot, 1988), then by definition they are more effective copers than women. Fielden and Cooper (2002) suggest that women's tendency to engage in emotion-focused strategies serves to exacerbate the negative effect of lack of personal control, increasing women managers' stress risk factors. However, McDonald and Korabik (1991) found that **both** men and women managers report taking direct action to solve work-related problems. Long (1990) observed no gender differences in managers' use of instrumental coping, including internal control and preventative strategies. Lazarus and Folkman (1980) failed to observe gender differences in the use of emotion-focused coping and found a propensity for men to pursue a problem-focused approach more than women only in highly circumscribed conditions.

4.5 Personality & Coping

A further classification of coping refers to a person's **coping style** that groups individual strategies within an enduring trait, approach or orientation (Fleming, Baum & Singer, 1984), for

example, approach/avoidance or active/passive (Suls & Fletcher, 1985). A repertoire of strategies, together with coping focus and style, introduces greater flexibility and resourcefulness, which in themselves are important coping tools (Roth & Cohen, 1986). A person's coping repertoire is shaped by his or her private agenda, attitudes, beliefs and values; by social statuses such as gender, class, and age; and by personal stress resistance resources such as hardiness, self-efficacy, control and social support, together with health-related factors such as wellness, diet (Lindquist et al, 1997) and exercise (Kobasa, Maddi & Pucetti, 1982). Thus, personal characteristics and resource variables operate an important platform from which coping behaviours are expressed and shape the coping process, giving further impetus to their investigation in this study.

4.6 The Coping Context

A person's coping mechanism is also influenced by **environmental conditions** that shape and determine the appraisal of possible coping outcomes. For example, the type of structure, culture, functions, and resources of an organisation may determine the meaning of a particular encounter (primary appraisal) as threatening or demanding for a manager. This organisational influence may also affect the availability of coping resources (control, power and authority) during the secondary appraisal process. **Control** has particular relevance in the discussion of women's coping effort with respect to the norms, values and rules implicit in organisational culture (Fielden & Cooper, 2002), and in terms of the explicit limits on women's organisational influence (Handy, 1988). Research suggests that women managers' ability to cope with stress may be adversely affected by their tendency to adopt a **Type A behaviour pattern** in an organisational context (Greenglass, 1993). In addition, Type A individuals are particularly challenged when their control is threatened. Their primary response in such situations is an attempt to aggressively exert and maintain control over their environment (Caplan, 1983).

Thus, the coping context and its relationship to coping need to be appropriately investigated in stress research (Cooper et al, 2001).

4.7 Measuring Coping

The measurement of coping is a debatable issue (Cooper et al, 2001) concerning, for example, whether to assess coping effectiveness, frequency of use, or how a person copes with stress in general or specific encounters (Bar-tal & Spitzer, 1994). No consensus has been agreed as to how this should be done other than to suggest that measures should essentially capture what individuals think and do in potentially stressful encounters; be non-evaluative about coping effectiveness; ensure a range and breadth of strategies that capture the complexity of the coping process; and provide a valid framework for exploring the role of coping in the stress process (Dewe, 2000). Coping measures have been constructed both deductively from existing literature

and research on coping, and inductively by examining, describing and developing coping categories based on strategies that individuals report using. Proponents of alternative approaches, for example, Lazarus (1999), argue that quantitative self-rating questionnaires may be too blunt to adequately capture the complexities of the stress-coping process as laid out in the transactional model. Rating scale formats may obscure, distort or fail to provide adequate information on coping. Lazarus suggests that coping may be investigated using qualitative techniques that more adequately capture the richness and idiographic nature of the stress-coping process, and overcome some of the structural limitations imposed by self-report measures.

This raises questions regarding the methodological approach selected in the present study. If the researcher employs a quantitative approach using standardised measures of coping, how can she ensure that the coping responses identified in the literature reflect the specific experiences of the population under investigation? On the other hand, if qualitative methods are used, how should questions be framed to elicit valid accounts of an individual's reactions to various environmental demands, bearing in mind the constraints of social desirability and selective recall of behaviours? (Cooper et al, 2001). Both approaches have advantages and disadvantages in stress research. In the present study, qualitative in-depth interviews, designed to get at some of the personality, contextual and emotional variables involved and how individuals appraise what is happening, will be utilised to help understand the relational meanings underlying the stress-coping process.

4.8 Coping Summary

A brief overview of the coping literature thus emphasises the specificity of the stress-coping response, i.e. coping behaviour and outcome is highly dependent on the personal characteristics of the coper and the coping context (Lazarus & Folkman, 1984). Coping does not occur in a personal or contextual vacuum. Rather it is operationalised by an individual in response to a specific set of circumstances. Thus, any analysis of coping efficacy in the present study must take account of both the characteristics of the person and their situation (Greenglass, 2002). Qualitative approaches used in the present study to research coping provide both a method for identifying how individuals cope and a context for understanding the nature of the coping process itself (Cooper et al, 2001:168).

Chapter 5: Rationale and Framework for the Study

The literature on job stress in healthcare managers appears somewhat fragmented, emerging as it does from a number of disparate research themes. However, with respect to the above discussion, this section outlines a rationale for the current study and presents the research questions and hypotheses.

5.1 Job Stress In NHS Managers

The review highlights the wide range of potential stressors inherent in a general manager's role that appear to be more prevalent in complex public sector organisations than in the private sector. There is convincing evidence that the prevalence of stress is substantially higher among NHS managers than among their counterparts in other organisations, and that levels of job stress are generally higher for healthcare managers than for staff in other NHS occupational groups. However, the paucity of empirical research on healthcare managers suggests that the specific problems of stress for this staff group have gone largely unrecognised.

The literature emphasises the need for a body of effectively functioning managers if the NHS is to achieve the goals set for it in the new millennium. This is reinforced by government acknowledging that the well-being of the NHS workforce is a prerequisite to the well-being of patients. It is therefore important in this study to obtain evidence of the mental health of a sample of NHS managers and to identify the potential stressors in their workplace in order to provide an objective basis for future action within a comprehensive occupational health framework.

5.2 Individual Differences In The Stress Process

A complicating factor in any assessment of workplace stressors is the role of individual differences. There is clear evidence that demographic, personality, support and situational variables influence the extent to which a person both perceives and reacts to stressors. Nevertheless, it remains unclear how such individual differences work or how, and indeed if, they should be incorporated into research to control for their effects.

This study takes the view that it is only through the exploration of the mediating or moderating impact of people's individual differences that we will adequately understand the complex relationship between stressors and strain. Thus, variations in personality, beliefs, values, expectations and attitudes that may act as 'resistance resources' to protect the managers from stress will be explored in order to add to our knowledge of the stress process. The intention is to use this knowledge to develop effective stress management interventions that will assist the construction of a healthy organisation.

The literature also suggests that we make as much progress in understanding perceived stress by studying those who do not experience it as those who do. Several personality characteristics and resilience or resistance resources, particularly those related to coping responses, have been found to help people resist the deleterious effects of stress, and the study seeks to identify how some managers cope with high levels of job stress and stay healthy.

5.3 The Importance Of Affect

The question of affect as a component of the stress process has been given scant attention in the literature. To expand our perspectives on stress and emotion, this study will also identify and examine the range of affective reactions experienced by managers with respect to specific stressful situations.

5.4 Theoretical & Methodological Framework

The researcher adopts, at a conceptual and theoretical level, the transactional model of stress as a framework for exploring the dynamic relationship between workplace pressures experienced by the managers and the consequences of those pressures on the managers in terms of their physical and mental health. The emphasis of the study is on stress as a process and stress as a relational construct.

There has been considerable debate as to whether potential stressors should be measured objectively or subjectively, or perhaps in both ways. On the one hand, in the transactional model, it is clear that the manager's ***perceptions*** of potential stressors will be central, that is, the manager must perceive a potential stressor as harmful or threatening for it to be likely to cause harm. On the other hand, there must be some ***objective basis*** to the potential stressor or hazard - it cannot all simply be a matter of individual perception (Rick et al, 2001).

Quantitative or deductive research is normally carried out using structured questionnaires and data are subjected to statistical analyses. This approach is useful for testing hypotheses about relationships between known entities to provide significant, objective results. Qualitative or broadly inductive research tends to use more open-ended interview questions and is useful for exploring phenomena and subjective meanings in greater depth (O'Driscoll & Cooper, 1994). Deductive and inductive methods both have advantages and limitations and each generates information that is not readily obtainable using the other approach.

The present study will adopt the recommendations of Cooper et al, (2001) to move away from a total reliance on quantitative measures of stressors and strains. Thus a bi-modal approach will be utilised in order to add to our initial understandings of the stress process and to produce a

richer account of the local meanings of job stress, and the interactions that create those meanings, than is possible using one methodology alone.

Accordingly, this study will be in two parts and seek to achieve the following aims and objectives:

- **Quantitative survey of managers in one NHS Trust**
  (n = 138)
  Phase I: A survey will measure and investigate three conceptual domains of the stress process - stressors, strains and moderating variables - using statistical techniques of the deductive paradigm.

- **Qualitative interview analysis of a purposefully selected sample of managers**
  (n = 12)
  Phase II: The nature and complexities of the relationships of the stress variables will be explored in greater depth using a broadly inductive grounded theory approach to access the personal meaning inherent in the stress process for different individuals.

Aims Of The Study

5.5 Phase I: Quantitative Measurement Of Job Stress

Phase I sets out to investigate the scale, severity and frequency of occupational stress in a sample of managers in one NHS Trust. Core objectives are to determine (i) the levels of strain experienced by the managers, (ii) those stressful working conditions which have the greatest impact on the managers' mental health, (iii) those variables which moderate the stressor-strain relationship, and in addition, (iv) to identify a sample of managers for the Phase II qualitative exploration of job stress. A structured survey approach and statistical techniques will be used to identify and investigate predominantly correlational and predictor relationships between stressor, strain and moderator variables.

Key Objectives:

- Assess the levels of job-related strain (psychological distress) experienced by a sample of managers in one NHS hospital Trust.
- Determine the extent to which strain is associated with work-related factors.
- Discover which work-related stressors are the main risk factors for high levels of strain for the managers.
- Compare the prevalence of strain experienced by the sample of NHS managers with that of other managers working in public and private sectors of industry.

- Discover which, if any, demographic factors are associated with strain and/or moderate the stressor-strain relationship.
- Identify any significant differences in health-related outcomes for managers according to grade or gender.
- Identify high pressure/low strain, and high pressure/high strain category managers as potential interviewees for phase II of the study.

Key questions relating to the above and which this study will seek to address are:

- How prevalent is job-stress amongst managers in one NHS Trust?
- Is the level of strain for this sample of NHS managers higher than for managers in the general working population?
- What work factors are most strongly associated with strain amongst the managers?
- Is any particular grade of manager (senior, middle, junior) significantly more stressed than another?
- Are female managers suffering more from strain than their male counterparts?
- Do any demographic and/or situational variables moderate the stressor-strain relationship?

Phase I research hypotheses predict that:

- Significantly high levels of strain (psychological distress) will be evident in this sample of NHS managers.
- NHS managers will demonstrate significantly higher prevalence rates of strain than managers in the general working population.
- Female NHS managers will demonstrate higher levels of strain than their male counterparts.
- The amount of strain demonstrated by the managers will be inversely related to perceived levels of workplace support.
- There will be an association between job stressors and strain on the managers.
- There will be an association between workload, hours worked and strain on the managers.

5.6 Phase II: Qualitative Exploration of Job Stress in NHS Managers

Phase II seeks to deepen the Phase I survey findings; illuminate and clarify the meanings of job stress; and offer further explanations and rich descriptions of the stressor-strain-health relationship for a small sample of managers (n=12) in an NHS hospital context; through the use of a qualitative research method (semi-structured interviews) and a broad grounded theory analysis (Strauss & Corbin, 1990).

The personal experiences, understandings, and perspectives on work-related stress and coping for a purposefully selected sample of healthcare managers will be explored in depth and in their own terms using semi-structured interviews. Complex variables such as personality dispositions, attitudes, stress emotions, beliefs, workplace support, and the investigation of any variance in health outcomes that may be explained by these individual differences, will be explored through a broadly inductive, grounded theory approach.

Qualitative Research Questions:

- What is the nature of the individual differences that influence the stressor-strain-health relationship and give rise to differential health outcomes between individual managers?
- What are the similarities and differences in the ways men and women managers experience and cope with job-related stress?
- How do men and women managers experience and express stress emotions in the workplace?
- How do some managers experience high levels of work-related stress and stay healthy?

In the present bi-modal study, the Phase I methodology, results and discussion will be presented first, followed by the Phase II exploration, narrative, methodological issues and discussion.

Chapter 6: Phase I - Quantitative Survey Of Job-Stress

Phase I: Method

6.1 As outlined above, Phase I of this study is trying to build a picture of job-stress amongst a sample of managers in one NHS Trust by measuring psychosocial hazards[7] and harms (job-stressors and strains) and attempting to establish what kinds of relationships, if any, exist between them through statistical analyses.

Phase I: Measures

6.2 The Phase I survey consisted of a three-part, self-administered questionnaire battery incorporating:

a) **General Health Questionnaire (GHQ-12)** as a generic measure of mental health (strain) (Goldberg, 1972; Goldberg & Williams, 1991).

b) **Job Stress Survey (JSS)** to identify and measure the severity and frequency of specific work-related problems (stressors) perceived to be the main risk factors for stress among the managers (Spielberger, 1994) (Appendix A).

c) **Biographical Questionnaire** to obtain general background information on age, gender, hours worked, managerial grade, salary band, ethnicity and length of time in post (Appendix C).

Phase I: Context

6.3 The context for this study is a large, general NHS hospital trust (approx. 6000 employees). According to a recent clinical governance review conducted by the Commission for Health Improvement (CHI) (2001), the trust is a major sophisticated healthcare provider that has managed a substantial change agenda over the past five years. The organisation faces challenges in routine day-to-day activity thought to be associated with frequent pressures of balancing capacity and demand. The trust's activity levels are around three times the English average, but its resources (income, staff and beds) are less than two times the average. Several high profile investigations have attracted local public and media attention. The trust has also undergone a recent fundamental restructuring of management (Roberts, 2001).

Phase I: Ethical Issues

6.4 Ethical endorsement of the study was obtained from City University and the local Research Ethics Committee. The study outline was presented to the hospital trust Senior Management

[7] In effect, this study could be said to parallel the first two stages of a five-step Health & Safety Executive (2001) work– related stress risk assessment procedure, which seeks to aid diagnosis of the problem and provide a framework for intervention. According to the HSE (2001), a risk assessment consists of three elements: a hazard - anything that has the potential to cause harm; harm - the impact of the work hazard; risk - the chance that someone will be harmed by the hazard. A risk assessment quantifies and offers explanations of the hazard-harm relationship (Cox ,1993).

Board for authorisation by the Chief Executive. This highlights the political sensitivity and difficulty of studying NHS staff populations which, combined with a public-interest topic such as work-related stress, may draw unwanted media interest. Another hurdle was that the local Research Ethics Committee appeared more familiar with medical rather than psychological research, as evidenced by the requirements of their 11-page ethics questionnaire. Support and endorsement of the project were also obtained from the Human Resources Director, Staff Side and the Hospital Health & Safety Officer, who regarded the study as a valuable starting point in a psychosocial stress risk assessment (HSE, 2001).

Phase I: Measures of Work Stressors

6.5 The Job Stress Survey (JSS) is a 30-item psychometric measure designed for use with managerial, professional and clerical employees (Turnage & Spielberger, 1991; Spielberger & Reheiser, 1994; Vagg & Spielberger, 1998, 1999; Hiew, 1995). It was used to assess the perceived intensity (severity and frequency) of working conditions that are likely to adversely affect the psychological well-being of employees exposed to these stressors. The JSS provided scores on the severity of stressful experiences (30 items), the frequency of stressful experiences (30 items) and the perceived intensity of those experiences (the sum of the cross products of the severity and frequency scores). There are also two distinct subscales measuring job pressure and organisational support (both ten items).

6.5.1 Utility of the JSS

Respondents were asked to indicate the amount of stress (i.e. the severity) they perceived to be associated with each of 30 items on a scale of 1-9 in comparison to a standard stressor (the assignment of disagreeable duties), which is rated at 5. The respondents were then asked to indicate (on a scale of 1-9+) the number of days over the previous six months when they had been exposed to/encountered this stressor. Typical items included: 6a: *Inadequate support by supervisor*; 7a: *Dealing with crisis situations.*

An HSE review of psychosocial hazard measures (Rick et al, 2001) rates the empirical performance of the JSS from 'good to marginal.' Overall quality of reliability evidence is rated as 'good' for internal and test-retest reliability and reliabilities for all scales are high, suggesting a 'good' level of internal consistency. The items of the scale (face and content validity) are described as 'reasonable,' and the structure of the scale (construct validity) appears 'good.' Unfortunately, the JSS does not yet have any British managerial norms for comparison.

Phase I: Measures of Strain

6.6 The twelve-item General Health Questionnaire (GHQ-12) was used to measure strain. It was specifically designed as a self-administered screening test for detecting minor psychiatric

disorder in the general population. It covers feelings of strain, depression, inability to cope, anxiety-based insomnia, decision-making, loss of confidence and esteem, and other psychological problems reflecting stress. The GHQ-12 was selected for use in this study, firstly, because it is one of the best-validated instruments of its kind (Borrill et al, 1998) and has been validated for use with employees of the UK NHS (Hardy et al, 1999). Secondly, it provides a means of identifying the proportion of respondents reporting significant levels of psychological distress ('cases') and thirdly, it enables direct comparison of the present findings with those from other samples.

A criticism of the GHQ is that, as its items focus on the inability to carry out normal activities and the appearance of new and distressing symptoms, those who are chronically distressed may not reach 'caseness.' In addition, its threshold scores may vary with types of sample and setting (Hardy et al, 1999).

6.6.1 Scoring The GHQ-12

The GHQ-12 can be scored in two ways: the *GHQ method* and the Likert method. The original scoring method, known as the *GHQ method*, is used to identify individuals reporting significant psychological distress and classify them as probable 'cases' of minor psychiatric disorder. The questionnaire items identify a particular symptom or state, for example - 'Felt constantly under strain?' and respondents indicate on a response scale the extent to which they 'feel better,' 'the same,' 'worse' or 'much worse than usual' with respect to that state. With weightings of 0, 0, 1, or 1 allocated to the response columns, the number of items on which the individual reports himself or herself to be worse or much worse gives a total GHQ score from 0-12. The total score is used for 'case' classification - a simple distinction between case and non-case. In the present study, a conservative 3/4 threshold for 'caseness' was used based on the validation study by Hardy et al, (1999).

6.6.2 Likert Method of Scoring

A second way of scoring the GHQ-12, known as the Likert method, is to assign a value of 0, 1, 2 or 3 to each of the response scale options ('better than usual, same as usual, less than usual, much less than usual') and to sum these across all 12 items. This gives a continuous distribution of scores ranging from 0-36. This Likert scoring method uses all the information within the GHQ response scales and it is employed in the present study as the primary basis for **statistical significance testing**. Thus, the original *GHQ scoring method* considers only the number of symptoms and is an 'area' measure of strain, whilst the Likert is a composite, dimensional measure, encompassing both area and intensity.

6.6.3 Statistical Testing

Testing for occupational or other effects using GHQ scores required different statistical techniques depending on the scoring method used. For the *GHQ scoring method,* which gives a dichotomous dependent variable (case versus non-case), non-parametric techniques were called for, e.g. chi-squared or logistic regression were employed as appropriate (Borrill et al, 1998). For scores based on the Likert method, however, normal parametric techniques were called for, such as t-tests, analysis of co-variance and linear regression. Both methods of scoring and their associated statistical analyses gave essentially the same results with regard to effects. Thus, since the Likert scoring method contains more information than the GHQ scoring method and the parametric tests are more powerful than their non-parametric counterparts, the statistical effects reported in the study were based primarily on parametric methods.

When testing for differences, for example, between managerial subsamples, the potentially confounding factors of age, gender, marital status, and number of dependent children were controlled for because of their significant relationships with the GHQ scores. Three conventional levels of statistical significance, namely, $p<.001$, $p<.01$ and $p<.05$ were used for this analysis involving relatively small sample sizes.

Phase I: Biographical Questionnaire

6.7 It was important to have information on the distribution of occupational stress by key demographic variables such as age, gender, ethnicity, marital status, and number of dependent children (Smith et al, 2000). In addition, information on management grade, salary, hours worked, time in post, full or part time, was required. Grade of manager was particularly difficult to define with respect to middle, junior and senior levels, possibly because of new localised pay scales and the introduction of a more flattened organisational structure. To aid comparison, an attempt was made to match the management grades with those defined for NHS managers in the study by Borrill et al (1998). Information from the Whitley Council Admin. & Clerical scales (AL (AC) 1/2000) (DoH, 2000), the Trust Managerial Pay Scales (2000), and Health Service Circulars on pay and conditions for senior management in health authorities (NHS Executive, 1998) were also examined and compared. On the basis of these documents, managerial grades were allocated within salary bands that were verified by trust personnel officers. Junior managers were defined as first-line managers on pay scale to the top of Range 1 (HSC1998/017), middle managers were defined between Range 4 and 3, and senior managers were placed on Range 3 pay scale and above.

A **pilot study** of the Phase I questionnaires provided feedback (Appendix B) from ten managers with regard to any questions perceived as too intrusive. Minor changes were made to the content and layout of the biographical questionnaire.

Phase I: Participants

6.5 The pool of participants was obtained from 189 managers in one NHS hospital trust. A list of general managers was provided by the Personnel Department. Listings of managers with clinical responsibilities were obtained from the internal hospital e-mail directory. Initially, all 189 managers were approached through the e-mail system with an outline of the study and an invitation to participate. The researcher aimed to encourage the managers' interest and curiosity and engage them in a research project from which they and the organisation might hopefully benefit.

6.5.1 Anonymity & Informed Consent

Subsequently, each manager was sent a research pack containing a written invitation to participate (Appendix D), an explanation of the purpose of the study, an assurance of anonymity, a consent form (Appendix E) and the stress questionnaire battery. 'Occupational Health & Safety Unit' was used as the letter heading to enhance the authenticity of the project. The managers were assured that their responses would be pooled anonymously and information reported as group data. Participants were advised to contact the researcher if they required further information on stress management or to clarify any concerns about the study.

6.5.2 Respondents

Of the 138 participants who responded (73% return rate), 109 (79%) were classified as general managers on the trust managerial pay scale, 23 (17%) were senior nurse managers, and 6 (4%) were managers of the Allied Health Professionals. In the group of general managers, there were 51 men and 58 women. The senior nurse managers' group was predominantly female (83%), with 19 female senior nurse managers and 4 males. The allied health professionals' managerial group was very small, with 5 female and 1 male manager.

A 'chaser' letter (Appendix F) was circulated to all managers on the original mailing list within one month of the receipt of the first wave of responses, acting as an acknowledgment to those managers who had returned the questionnaires and as a reminder to those who had not.

6.5.3 Data Preparation

A one-month cut-off period was allowed following the distribution of the chaser letter. The questionnaires were then scored and data collated and entered on a computer database (SPSS 10). Statistical analysis proceeded with the aid of the SPSS 10 computer package.

Chapter 7: Phase I - Survey Results

7.1 Introduction

Phase I sought to determine the levels of strain experienced by the sample of NHS managers and those stressful working conditions that had the greatest impact on their mental health. A further aim was to gather stressor, strain and demographic information about individual managers in order to identify 'high and low strain' comparison groups for inclusion in the qualitative Phase II of the study. The following sections are divided into (i) the results of the GHQ survey (identifying strain), (ii) results of the Job Stress Survey (identifying stressors), (iii) predictors of mental health problems, and (iv) the impact of demographic variables on the stressor-strain interaction.

Phase I: Results (i) Levels Of Strain (GHQ Survey)

The levels of strain (psychological ill-health) reported by the managers in one NHS Trust were obtained in two ways:

- By measuring the prevalence of strain among the sample of healthcare managers (n=138) using the GHQ-12.
- By comparing the prevalence of strain for a subsample of general managers (n=109) working in the same Trust with that of other managers working in the public and private sectors.

7.2 Prevalence Of Psychological Ill-Health Amongst Managers In One NHS Trust

To determine whether differences in observed GHQ 'case' rates between the NHS sample of managers and other samples were statistically reliable, a test for the significance of the difference between proportions, chi square, was applied. For comparison of 'case' rates across subcategories (occupational grades) of managers within the sample, however, it was possible to use more sophisticated logistic regression procedures, controlling for potentially confounding demographic variables.

- ❖ The results of the analysis of GHQ data showed that the percentage of managers in the sample (n=138) suffering from significant levels of strain was high at 44.2%.

This sample was divided into two groups: *clinical* managers (nurse managers; allied health professionals) and *non-clinical* (general) managers. The percentage of general managers (n=109) identified as experiencing significantly high levels of psychological ill health, that is, categorised as 'cases' measured by the GHQ, are shown in Table 1. below. The results for clinical managers (n=29) are shown for comparison in Table 2.

Table 1.
Percentage of 'cases' identified by the GHQ-12 for five subcategories of managers on the Trust general managerial pay scale (n=109)

General Management Sub-categories	Men		Women		Total	
	% above stress threshold (cases)	N	% above stress threshold (cases)	N	% above stress threshold (cases)	N
Junior Managers	31.3%	16	56.5%	23	46.2%	39
Middle Managers	37.5%	8	50%	14	45.5%	22
Senior Managers	50%	18	41.7%	12	46.7%	30
Finance Professionals	66.7%	3	66.7%	6	66.7%	9
Information & Technical Managers	33.3%	6	33.3%	3	33.3%	9
General Managers Total % 'cases'	**41.2%**	51	**51.7%**	58	**46.8%**	109

Table 2.
Percentage of 'cases' identified by the GHQ-12 for two subcategories of clinical managers (n=29)

Clinical Management Sub-Categories	Men		Women		Total	
	% above stress threshold (cases)	N	% above stress threshold (cases)	N	% above stress threshold (cases)	N
Senior Nurse Managers	25%	4	31.6%	19	30.4%	23
Allied Health Professionals Managers	100%	1	40%	5	50%	6
Clinical Managers Total % 'cases'	**40%**	5	**33.3%**	24	**34.5%**	29

Conclusions drawn from this analysis include:

- 46.8% of general managers (n=109) on the Trust managerial pay scale report suffering significantly high levels of psychological ill health (probable 'cases').
- Just over one-third (34.5%) of clinical managers (n=29) report suffering significantly high levels of psychological ill health.
- Finance managers report the highest prevalence of psychological strain amongst all managerial subcategories at 66.7%.
- Information and technical managers report the lowest level of psychological strain among those on the general management pay scale at 33.3%.
- Overall, the lowest prevalence rate of 30.4% (n=23) is reported by clinical senior nurse managers.
- The prevalence of psychological ill health is found to be higher for general managers (46.8%) than for clinical managers at 34.5% (n=29) (ns).

7.3 Differences According To Managerial Grade

Although there were considerable observed differences in levels of strain across the different managerial occupational subcategories, the variation in the percentage of 'cases' was not statistically significant for grade.

7.4 Gender Differences

The reporting of significantly high levels of strain throughout the sample of managers masks the fact that there are rather different patterns for males and females within the subsample of 109 general healthcare managers. 51.7% of female general managers (n=58) reported significant levels of strain as measured by the GHQ compared with 41.2% of male managers (n=51). Testing for gender effects based on the Likert scores of the GHQ and using an analysis of variance (controlling for background factors), a significant difference in mean gender scores was observed within the 5% level (d.f.1, $p<.05$). Female general managers had significantly higher mean levels of psychological ill health than male managers overall (n=109).

7.5 Gender Differences At GHQ Item Level

The gender difference was further investigated at GHQ item level. For the subsample of general managers (n=109), an analysis of variance (controlling for background factors) was carried out to test for differences across gender for the twelve GHQ items. Female managers had significantly higher mean scores than male managers for the following four items: ***Felt less capable of making decisions about things than usual*** (d.f.3, $p<.05$); ***Been less able to face up to your problems than usual*** (d.f.3, $p<.05$); ***Been feeling more unhappy and depressed than usual*** (d.f.3, $p<.05$); and ***Been thinking of yourself as a worthless person more than usual*** (d.f.3, $p<.01$).

Conversely, for the subsample of senior nurse managers (n=23), men had significantly higher mean scores on the GHQ item ***'Been thinking of yourself as a worthless person'*** than women ($p<.05$).

7.6 Prevalence Of Strain: Comparisons Between Public & Private Sector Managers

So far, the results have shown that a large proportion, 44.2%, of the total sample of managers in the present study are significantly psychologically distressed. At face value this suggests some reason for concern, especially as the rates are based on a conservative 3/4 threshold score for the GHQ. However, there will always be a proportion of any large group of people suffering psychological distress and this raises the question of whether the present sample of managers in one NHS Trust has similar 'case' rates to those of other organisations. A particularly useful

sample which can be used as a benchmark is that provided by a longitudinal survey of stress amongst 11,000 employees in 17 NHS Trusts by Borrill et al, (1998).

The results in the following sections refer to the subsample of general healthcare managers only (n=109). This is because of limitations of space for reporting within the current study and the need to focus on those managers who will be selected to participate in the Phase II qualitative exploration of job stress.

7.7 Public Sector Managers

The present survey found that 46.8% of the *general managers* (n=109) in one NHS Hospital Trust are experiencing significantly high levels of psychological ill health as measured by the GHQ. This group was selected for comparison with samples of general managers in other healthcare settings.

To determine whether differences in observed GHQ 'case' rates between the managers in the present study and other samples were statistically reliable, a chi square test was applied. The 'case rate' of 46.8% for the present sample was found to be significantly higher that the 'case' rate of 32.8% (chi square = 8.29, d.f.1, $p<.01$) for a sample of 1029 general managers in the study of stress among NHS staff (Borrill et al, 1998). Both studies used a conservative 3/4 threshold of total GHQ-12 scores to identify the percentage of probable 'cases'.

7.8 Comparison With Other Public Sector Workers: 'The Whitehall II Study'

The prevalence of psychological ill health (41.2% for men & 51.7% for women) among general managers (n=109) in the present study was also substantially higher than the rates for both men and women in 'The Whitehall II Study' of over 8000 UK civil servants (Stansfield et al, 2000). Using the 30-item version of the GHQ, the Whitehall II Study found that between 18-22% of men and 21-39% of women reported significantly high levels of stress.

7.9 Benchmarking The Measurements Of Strain For NHS Managers In One NHS Trust Against Private Sector Managers

How does the prevalence rate of psychological ill health (46.8%) for the present sample (n=109) compare with that for other managers in the general working population? Evidence may be taken from the British Household Panel Survey (BHPS) which has GHQ-12 data on 5001 employed adults from a representative sample of British Households over the period 1996-1997. The GHQ-12 'case' rates for BHPS managers (sample size 809) were found to be much lower at 21.3% than the 'case' rates of 46.8% for the present sample of healthcare

managers. Thus levels of psychological ill health in the present NHS sample appear to be twice as high as those of managers in the general working population from the BHPS sample.

Comparisons between the prevalence of psychological ill-health among managers in the present study and managers in manufacturing (23%), using the GHQ-12, (West et al, 1995) also show the 'case' rates to be higher among healthcare managers.

7.10 Comparisons With 'The Bristol Stress & Health at Work Study'

The large scale Bristol stress and health at work study (Smith et al, 2000), which used self-report measures of stress - not the GHQ, found that occupational stress was described as 'very' or 'extremely stressful' for approximately 27.8% of the managers in their sample. This proportion was much lower than the 46.8% 'case rates' for the sample of NHS managers in the present study.

Conclusion

- The prevalence of psychological ill health among the present sample of general managers in one NHS Trust is substantially and significantly higher than among comparable NHS managers and managers from the general working population.

Phase I: Results (ii) Work-Related Stressors (Job Stress Survey)

7.11 Introduction

The following results arose from the analysis of the Job Stress Survey (JSS), the search for evidence of work-related stressors and their relationship with psychological ill-health.

7.12 JSS Results

The Job Stress Survey (JSS) results provided information about the perceived intensity (severity and frequency) of 30 job stressor events experienced by the subsample of general healthcare managers (n=109) in the present study. Sources of occupational stress experienced by this managerial group were also identified by the JSS. The means and standard deviations for the nine job stress scales computed for male (n=51) and female (n=58) healthcare managers are reported below in Table 3.

Table 3.
Means and Standard Deviations for the Job Stress Index (JS-X), Severity (JS-S), and Frequency (JS-F) Scale Scores; Job Pressure Subscale Scores; and Lack of Support Subscale Scores of Female and Male General Healthcare Managers (n=109)

			General Healthcare Managers' Mean Scores & SDs		
Job Stress Scales			**Females N=58**	**Males N=51**	**Total N=109**
JS Index					
	JS-X	M	25.89	24.89	25.42
		SD	9.14	10.37	9.7
JS Severity					
	JS-S	M	5.3	5.17	5.23
		SD	.88	.89	.88
JS Frequency					
	JS-F	M	4.66	4.3	4.5
		SD	1.25	1.6	1.43
Job Pressure Subscales					
JP Index	JP-X	M	32.58	32.94	32.75
		SD	11.6	12.55	12.0
JP Severity					
	JP-S	M	5.1	5.28	5.18
		SD	1.15	1.09	1.12
JP Frequency					
	JP-F	M	6.19	5.92	6.07
		SD	1.6	2.05	1.82
Lack of Support Subscales					
LS Index	LS-X	M	22.91	19.13	21.15
		SD	12.3	13.63	13.02
LS Severity					
	LS-S	M	5.59	5.2	5.4
		SD	1.02	1.32	1.18
LS Frequency					
	LS-F	M	3.64	4.13	3.87
		SD	1.74	7.4	5.2

7.13 Correlations: Testing Associations Between Job Stressors and Strains (JSS & GHQ Likert Scores) (Table 4)

Using the Pearson Correlation test, there was a significant relationship between the managers' scores on the 30-item Job Stress Index and their GHQ Likert scores ($r = .24$, $p < .05$). The 30-item Job Stress Frequency Index ($r = .271$), the 10-item Job Pressure Index ($r = .259$) and Lack Of Support Index ($r = .354$) were associated with the GHQ at the $p < .01$ level. The Job Pressure Severity scores were associated with the GHQ at the $p < .05$ level ($r = .194$). Thus levels of strain were positively associated with levels of perceived job severity, pressure, frequency and lack of support.

Table 4.
Relationships between Stressors and strains
Pearson Correlations for JSS & GHQ Likert Scores (n=109)

JSS Indexes	Pearson Correlation (r) (2-tailed)	p
Job stress index	.240	p<.05
Job stress severity	-	-
Job stress frequency	.271	p<.01
Job pressure index	.259	p<.01
Job pressure severity	.194	p<.05
Job pressure frequency	-	-
Lack of support index	.385	p<.01
Lack of support severity	-	-
Lack of support frequency	-	-

7.14 Comparison With the Normative Sample From Other Studies

One-sample T-tests were used to compare the healthcare managers' (n=109) mean scores for each of the nine JSS indexes with a normative sample of United States managers. The mean Job Stress Index score for the managers in the present study was high at m=25.42 (70th percentile). Using one-sample T tests, this was found to be significantly higher at $p < .01$ than the mean job stressor ratings (m=20.19) for a sample of managers in non-public corporations tested in the United States (n=983) (Spielberger & Vagg, 1999).

Further examination of the mean scale scores for the present NHS managerial sample found that both Job Stress Severity (55th percentile) and Job Stress Frequency (65th percentile) were elevated above average. On the 10-item subscales, the Job Pressure Index (95th percentile), Job Pressure Severity (65th percentile), and Job Pressure Frequency (70th percentile) scores were also elevated above the average range. All were significantly greater at $p < .01$ than the normative means for the United States sample of managers (n=983) presented by Spielberger & Vagg (1999).

For the present sample, the mean scores of the 10-item Lack Of Support Index were about average (55th percentile) but the Lack Of Support Frequency scores were more elevated (65Th

percentile). Only the Lack of Support Severity scores were below average (45th percentile) when compared with the US normative sample (n=983). These differences were not significant.

Conclusion

- Thus, the mean levels of perceived severity, frequency and pressure of job stressors for this subsample of UK NHS managers (n=109) were all significantly higher ($p<.01$) than the norms from a sample of 983 United States managers in non-public corporations in Spielberger & Vagg's study (1999).

7.15 Gender Differences At 'Item Level' Of The JSS

For all 9 JSS indexes, there was no significant variation in scores for gender for the sample of healthcare managers (n=109) implying that the perceived levels of job stressor intensity and frequency were similar for men and women. Gender differences in the JSS 'item' means were then evaluated in a one-way analyses of variance, controlling for background factors. The resulting F tests and levels of significance are reported in Tables 1-1.1 (Appendix G). Significant gender differences were found for four items (4 of 29), i.e. 13% of the JS severity scale, including:

- *Assignment of new and unfamiliar duties* - higher stress severity ratings for men (d.f.1, $p<.05$)
- *Inadequate support by supervisor* - higher severity ratings for women (d.f.1, $p<.05$)
- *Poor or inadequate supervision* - higher for women (d.f.1, $p<.05$)
- *Personal insults from consumers/patients/colleagues* - higher for women (d.f.1, $p<.05$)

Thus, a **job pressure** item - new and unfamiliar duties – was perceived to be more severely stressful for men than for women; whilst the **lack of support** items were perceived to be more severely stressful for women than for men. On the JSS Frequency scale only one item mean was found to be significantly higher for women than for men (n=109): *Noisy work area* (d.f.1, $p<.05$).

7.16 Job Stressor Ranks (Tables 1-1.1, Appendix G)

Both men and women managers ranked the following three stressors highest in terms of **perceived severity** : *Insufficient personnel to handle an assignment, Fellow workers not doing their job*, and *Frequent interruptions*. Both ranked the item *Periods of inactivity* lowest in terms of job stress severity. Similarly, for both male and female managers, the following three items were ranked highest as the **most frequently** experienced stressors: *Frequent interruptions, Meeting deadlines,* and *Working overtime.*

Phase I: Results (iii) The Job Stressor-Strain Relationship

7.17 Linear Regression 1: Predicting Mental Health From Demographic And Work-Related Factors

Linear regression analysis offers a way of explaining the variation in the dependent variable (mental health) by some of the independent or predictor variables (demographic and work-related factors). An initial linear regression analysis (stepwise) was used to determine the extent to which mental health, as defined by the GHQ Likert scores, could be predicted or explained by demographic variables and combinations of work-related factors (the nine Job Stress Survey indexes) for the sample of healthcare managers (n=109).

The variables were included in two blocks (Tables 5-5.1). In Block 1, with the GHQ as the dependent variable, relevant demographic and background factors were first entered into the equation (e.g. gender, age, marital status, number of children, salary band, qualifications, hours worked, time in post, full time/part time). In Block 2, the scores from the combinations of work stressor characteristics (the nine Job Stress indexes) were included. In stepwise regression, the independent variables were added to or taken away from the equation one at a time, the order of entry or removal being determined by statistical considerations. The logic of this method is that, where the Job Stress characteristic(s) removes (or reduces) the otherwise significant effect of the demographic variables, then it is sufficient to account for that effect.

The results of the linear stepwise regression computation are summarised in Tables 5-5.1.

Table 5.
Linear Regression: Predictors Of Mental Health Problems
Dependent variable GHQ scores (Likert); Independent variables: demographic items and work-related stressor factors from the Job Stress Survey

Block 1 (demographic variables entered)

Variables Included	Beta Coefficient	P<	
Step 1			
Gender	.211	.041*	
Hours worked per week	.181	ns	
Salary band	.133	ns	
Age	-.226	ns	
Marital status	.050	ns	
Dependent Children (N)	-.761	ns	
Qualifications	.176	ns	
Time in post	.136	ns	
Full time/part time	.088	ns	
		R^2 = .170	P<.024*

* significant at p<.05, ** significant at p<.01,*** significant at p<.001

Table 5.1

Block 2 (work-related stressor variables included stepwise)

Step 1: Variables included	Beta Coefficient	P<	R^2
Gender	.211	.041*	
			R^2 =.170 p<.024*
Step 2:			
Lack of support index	.294	.002**	
			R^2 =.252 R^2 change = .081 p<.002** Increase in R^2 through the addition of the Lack of Support Index is 8 %
Step 3:			
Gender	.196	.047*	
Age	-.240	.049*	
Lack of support index	.255	.006**	
Job pressure severity	.205	.033*	
			R^2 =.286 R^2 change = .034 p<.033* Increase in R^2 through the addition of Age and Job Pressure Severity is 3 %
Step 4:			
Gender	.233	.015*	
Lack of support index	.387	.000***	
Job pressure severity	.506	.000***	
Job stress severity	.425	.004**	
			R^2 =.346 R^2 change = .060 p<.004** Increase in R^2 through the addition of Job Stress Severity is 6 %
Overall, the inclusion of work related stressor variables in Block 2 account for an R^2 change from .170 to .346, which accounts for almost 18% of the variance in the GHQ scores			

*significant at p<.05, ** significant at p<.01,*** significant at p<.001

Two significant predictors of psychological ill health were the demographic variables of **age** and **gender,** i.e. female managers are more likely to suffer from work-related stress problems than their male counterparts. Age was inversely related to mental health problems indicting that the younger (possibly inexperienced) managers are more at risk. Work-related factors of perceived **lack of support** and **job pressure severity** were strongly and positively associated with mental health problems. Gender accounted for 17% of the variance in mental health; and lack of support accounted for 8%.

7.18 Linear Regression 2: Predicting Mental Health From Individual Job Stressor Items (Tables 6-6.1)

A similar multiple regression analysis (stepwise) was computed to determine the extent to which mental health problems could be predicted by the individual components of the JS Indexes (job stressor 'items'). As in Regression 1, the dependent variable was the GHQ (Likert) and similar demographic variables were included in block 1. These were then computed in a stepwise regression analysis which removed all statistically insignificant variables from the equation except 'Dependent children (N).' Job stressor items were then included in Block 2 and computed in a further stepwise regression analysis.

Table 6.
Linear Regression: Predictors Of Mental Health Problems
Dependent variable: GHQ scores (Likert) Independent variables: demographic factors and 30 work-related stressor '*ITEMS*' from the Job Stress Survey

Block 1 (stepwise computing of demographic variables)

Variable entered	Beta	P<	R^2
Step 1 summary			
Children (N)	-.242	.011*	
			R^2 = .059 p<.011*

Table 6.1

Block 2 (work-related job stressor '*ITEMS*' included stepwise)

Step 1:			
Variables included	Beta	P<	R^2
Children (N)	-.242	.011*	
			R^2 = .059 p<.011*
Step 2:			
Poor or inadequate supervision	.371	.000***	
			R^2 =.191 R^2 change= .133 p<.000** Increase in R^2 through the addition of Poor or inadequate supervision is 13%
Step 3:			
Poor or inadequate supervision	.406	.000***	
Poorly motivated co-workers	.221	.012*	
			R^2 =.239 R^2 change = .048 p<.012* Increase in R^2 through the addition of Poorly motivated co-workers is 5 %
Step 4:			
Poor or inadequate supervision	.289	.005**	
Poorly motivated co-workers	.226	.009**	
Difficulty getting along with supervisor	.221	.028*	
			R^2 =.274 R^2 change = .035 p<.028* Increase in R^2 through the addition of Difficulty getting along with supervisor is 4%
Overall, the inclusion of work-related stressor *ITEM* variables in Block 2 account for an R^2 change from .059 to .274, which accounts for 22% of the variance in the GHQ scores.			

*significant at p<.05, ** significant at p<.01,*** significant at p<.001

The amount of variation in mental health problems is further explained by the number of dependent children which the managers have. Number of children is inversely related to mental health problems, therefore, having no children at all puts the manager at greater risk of mental health problems

- Three Job stressor items emerge as significant in the prediction of mental health problems: *Poor or inadequate supervision; Difficulty getting along with supervisor*; and *Poorly motivated co-workers*. Thus, the effect of lack of workplace support and inadequate supervisory relationships are overwhelmingly implicated as predictors of poor mental health for the managers.

Phase I: Results (iv) Impact Of Demographic Variables On Work-Related Stress

7.19 General Format of Results

A further analysis was carried out to gather information on the distribution of occupational stress by key demographic variables for the sample of healthcare managers (n=109). Initial cross-tabulations were produced to indicate the proportion of self-reported job strain in each subcategory of variables, with 'stressed' being defined as those scoring 3/4 and above on the GHQ ('probable cases'). In these results, the tables cross-tabulate two or more variables, each divided into several categories or levels. The cells of the table hold frequency counts and percentages of respondents falling into the various categories. The details of the chi-square statistic, used to assess the strength of any relationship, are given in the descriptive text following each set of tables.

7.20 Age

Age of the sample of managers was analysed by quartiles. This meant that each age group had large enough numbers to permit combination with other variables. For n=109, the cross tabulation of age group with work stress (GHQ-12 'cases') is shown in Table 7. A chi-square test revealed a significant effect for age group (chi square = 7.261, d.f.3, $p<.05$) reflecting higher prevalence rates of job stress in the younger age groups and lower rates for the older age group.

Table 7.
Work stress by age group cross-tabulation

Work stress	Age Group			
	18-32	33-40	41-50	50+
Not stressed	33.3%	42.9%	42.9%	69.6%
	(5)	(15)	(15)	(16)
Stressed	66.7%	57.1%	38.9%	30.4%
(GHQ 'case')	(10)	(20)	(14)	(7)

There was a significant inverse relationship between age of manager and psychological ill health (GHQ Likert) (Pearson correlation = -.210, $p<.05$).

7.21 Marital Status

Table 8.
Work stress by marital status cross-tabulation (ns)

Work Stress	Marital status		
	Married/partner	Single	Divorced/separated /widowed
Not stressed	56.2%	20%	60%
	(50)	(2)	(6)
Stressed	43.8%	80%	40%
(GHQ 'case')	(39)	(8)	(4)

Using an analysis of variance, controlling for background factors, to test the effects of marital status on psychological ill health (GHQ Likert), there was a significant variation between the mean levels of strain for different marital categories at (d.f.3, $p<.05$). Single managers demonstrated the highest mean levels of strain and divorced/separated managers the lowest.

7.21 Average Reported Hours Worked Per Week

The mean number of reported hours worked per week was 45 hours (n=109). 31.2% (34 of the managers) reported that they worked over 48 hours per week. Of those, 8.8% (3 managers) reported working over 60 hours per week and were significantly stressed. The interaction between hours worked and levels of strain was not significant.

Table 9.
Work stress by hours worked (ns)

Work stress	reported average hours worked per week				
	< 35 hours	35-39 hours	40-49 hours	50-59 hours	60-69 hours
Not stressed	75 %	66.7 %	51.7 %	48.1 %	50%
	(3)	(8)	(31)	(13)	(3)
Stressed	25%	33.3%	48.3%	51.9%	50%
(GHQ 'case')	(1)	(4)	(29)	(14)	(3)

The variance in reported mean hours worked per week between different grades of managers was significant (d.f.4, $p<.01$) with senior managers working the longest hours. There was a strong interaction between hours worked per week and salary band (chi square = 52.81, d.f.16, $p<.001$).

Table 10.
Variance in mean hours worked across managerial category

		Reported Hours Worked Per Week	
Managerial Category	N	Mean	SD
Senior	30	50.13	5.87
Middle	22	43.64	4.72
Junior/first line	39	43.64	6.42
Finance	9	43.83	8.87
Information	9	37.94	10.04
Total	109	44.97	7.34

7.33 Relationships Between Hours Worked and Job Stressors

Using the Pearson Correlation test there were significant positive associations between reported hours worked by the managers (n=109) and the following JSS scales relating to severity and frequency of perceived work stressors:

Job Stress Index ($r=332$, $p<.01$)
Job Stress Frequency ($r=.396$, $p<.01$)
Job Pressure Index ($r=.406$, $p<.01$)
Job Pressure Frequency ($r=.481$, $p<.01$)

7.34 Children (N)

There was a significant inverse relationship between number of dependent children and levels of strain (Pearson correlation = -.242 d.f.1, $p<.01$) (i.e. fewer children more stress). There was a strong interaction between number of children and gender (chi square = 12.69, d.f. 5 $p<.05$), and age of manager (chi square = 194.22, d.f. 160 $p<.05$), with younger women managers having the least number of children.

Table 11
Manager's work stress by number of children cross-tabulation (ns)

Work stress	Number of children						
	0	1	2	3	4	5	Total
Not stressed	39.5%	46.2%	66.7%	50%	-	100%	53.2%
	(15)	(6)	(30)	(5)		(2)	(58)
Stressed	60.5%	53.8%	33.3%	9.8%	100%	-	46.7%
(GHQ 'case')	(23)	(7)	(15)	(5)	(1)		(51)

The mean number of dependent children for this subsample of managers was 1.35 (sd 1.18). About one third of all the managers (n=109) had no children. Of those with no children, 60.5 % (predominantly women) had significant levels of psychological ill health. 48.3% of the total number of women managers had no children.

Chapter 8: Phase I - Discussion & Conclusions (Quantitative Survey Of Job Stress In NHS Managers)

8.1 Introduction

Phase I set out to investigate the scale, severity and frequency of occupational stress in a sample of general managers in one NHS Trust. It also sought to identify those stressful working conditions that have the greatest impact on the managers' mental health, and some of the variables that might moderate the stressor-strain relationship. This section summarises the Phase I study results as they relate to the research questions, hypotheses and the literature. Since these results have been presented in detail in Chapter 7, only the central themes will be discussed here and elaborated further in Phase II.

8.2 How prevalent is occupational stress among this sample of NHS managers?

The results support the hypothesis that levels of psychological ill health will be high for this sample of NHS managers and higher than for managers in the general working population and private sectors (Stansfield et al, 2000; Smith et al, 2000). In addition, the levels of work-related strain are significantly higher than for managers in other healthcare studies (Borrill et al, 1998). This suggests that healthcare managers in the present sample might be exposed to work-role and organisational stressors in excess of their NHS counterparts, possibly as a result of the current management restructuring, the recent high level Trust investigation, the CHI review, and the large size and complexity of the organisation. Alternatively, the findings might suggest that the participants have less effective coping strategies or support mechanisms, or both.

Confidence in the GHQ findings may be reduced by the inherent subjectivity of self-report questionnaires, the selected threshold of psychological 'caseness' (although a conservative 3/4 in line with the NHS validation study by Hardy et al, 1999), and the possible confounding effects of negative affectivity and responder bias.

8.3 Are female managers suffering more from strain than their male counterparts?

Female managers in the sample report significantly higher mean levels of psychological ill-health than their male counterparts, supporting the research hypothesis and the literature on women's mental health in general (Vermeulen & Mustard, 2000). With respect to gender differences at the 'item' level of strain measurements, female managers report feeling significantly *'more worthless,' 'more unhappy and depressed,' 'less capable of making decisions'* and *'less able to face up to their problems'* than the male managers. This supports the literature suggesting that women in general respond differently from men in terms of reported stress outcomes (Davidson & Fielden, 1999) and that women managers are more at risk from managerial stressors than their male counterparts (Nelson & Burke, 2002).

8.4 Which work characteristics (stressors) are most strongly associated with strain?

The perceived intensity (severity and frequency) of numerous job stressors was found to be significantly higher for this sample of healthcare managers than for a United States normative sample of managers. However, the Job Stress Survey does not have any published British norms and, as the results were tested against US norms, this reduces their significance.

The findings are consistent with the literature view that the roles of managers are demanding and that they are exposed to a wide range of work and organisational sources of stress (Smith et al, 2000). Typically, this sample of managers attribute greater **intensity** to those stressors over which they have less control or decision latitude (Karasek, 1979), including *'frequent interruptions', 'meeting deadlines,' 'insufficient personnel,' 'dealing with crisis situations,' 'excessive paperwork'* and *'fellow workers not doing their job.' Working overtime* is also identified as a key stressor with 31.3% of the managers reporting that they work over 48 hours per week, that is, above the European Communities Working Time Directive (1993). Long hours are associated with job pressure intensity, pressure and frequency. This long hours culture has considerable physical and mental health implications for the managers, particularly for the women (Lundberg & Frankenhauser, 1999; Harrington, 2001).

The most **frequently** experienced job stressors include the above items together with *'performing tasks not in the job description'* and *'insufficient personal time for breaks, lunch, etc.'* The reported stressors conform to taxonomies of work-related stressors identified in the literature (Cooper et al, 2001) and add to the knowledge on job stressors **specific** to NHS managers on which there is little empirical research.

8.5 Do men, women, or different grades of manager experience different types or intensity of job stressors?

With respect to gender or grade of manager, there are no significant differences in reported levels of intensity, frequency and pressure of work-related stressors. However, men and women managers do experience some different types and intensity of stressors at the 'item' level of investigation. For example, the pressures of *'new and unfamiliar duties'* are significantly greater for men than for women, possibly reflecting men's unease about asking for help (Good et al, 1989). *'Inadequate support by supervisor'* and *'poor or inadequate supervision'* are more significant stressors for females, confirming gender role stereotypes of the central importance of supportive relationships to women's mental health (Greenglass, 2002). Women also rate *'personal insults from colleagues, patients and relatives'* as more stressful than the men, suggesting that women are more likely to experience this type of psychosocial stressor than their male counterparts (Vermeulen & Mustard, 2000) and/or that men are better able to handle workplace hostility.

With respect to **frequency** of job stressors, *'noisy work area'* is the only stressor reported more frequently by the women than men - a finding that requires further investigation at the environmental or sensory level.

8.6 Which work characteristics most strongly predict psychological ill health for the managers?

With respect to the stressor-strain relationship, the job stressor factors found to consistently predict mental health outcomes are *'lack of support'* and *'job pressure severity.'* Specific stressor items - *'poor or inadequate supervision,' 'difficulty getting along with one's supervisor'* and *'poorly motivated co-workers'* are significant predictors of psychological ill health. This confirms the literature findings that the support construct, particularly an employee's relationship with his or her supervisor and co-workers, has a direct effect on workplace stress (Stansfield et al, 2000; Greenglass, 2002).

8.7 Which demographic characteristics have the greatest impact on the stressor-strain relationship?

Significant predictors of the manager's psychological health are the variables of gender, age and number of dependent children. Marital status is also associated with strain. Thus, younger, single, female managers with no children and poor supervisory and co-worker relationships appear most at risk of suffering job related strain.

8.8 Strength of the Findings

The statistical relationship between job stressors and strain in the present findings are relatively weak. They are also correlational and therefore do not imply causation. The study is not longitudinal, as is the Borrill et al (1996, 1998) large scale NHS study. We can, therefore, only make inferences about the findings that suggest that, at the time of the survey, some aspects of the hospital environment were perceived as potential stressors and the managers were experiencing considerable levels of strain. Life events and domestic stressors, that may also have an influence on strain, were not measured in this survey.

The methodological issues relating to these findings are discussed further in Chapter 13. The findings are explored and elaborated in Phase II through a qualitative analysis of the job stress experiences of a small sample of managers purposefully selected from the Phase I group.

Chapter 9: Phase II - Qualitative Exploration of the Stressor-Strain-Health Relationship in a Purposefully Selected Sample of NHS Managers (n=12)

Phase II: Method

9.1 Phase I of the study aimed to quantify the job stressor-strain or hazard–harm relationship for a sample of managers (n=109) working in one NHS Trust. Phase II seeks to deepen the survey findings and offer further explanations and rich descriptions of the stressor-strain-health relationship through the use of a qualitative research method (semi-structured interviews) and a broad grounded theory analysis (Strauss & Corbin, 1990). In particular, Phase II will explore how and why job stress brings about differential health outcomes in a purposefully selected sample of managers (n=12).

Phase II: Design

Data Collection:

- Semi-structured interviews of twelve purposefully selected managers (n = 12)

Analysis:

- Verbal transcript data analysis using a broad 'grounded theory' approach of the qualitative paradigm

Phase II: Procedural Outline

1. Identify sample of managers (n=12) according to criteria of 'high pressure/**high strain**' and 'high pressure/**low strain**' index scores (Appendix M) derived from Phase I survey.
2. Develop semi-structured interview schedule (Appendix K) based on Phase I survey results and stress literature.
3. Pilot/refine interview schedule with two managers selected from Phase I survey sample.
4. Recruit participants: (n=6) managers from 'high pressure/**high strain**' group (3 men; 3 women); and (n=6) from 'high pressure/**low strain**' group (3 men; 3 women).
5. Undertake semi-structured interviews and transcribe.
6. Code and analyse transcripts with the aid of a computer software programme (NUD*IST 4 classic) (Gahan & Hannibal, 1998) and a grounded theory approach.
7. Develop a core category and analytic storyline.

Phase II: Data Collection

9.2 In-Depth Semi-Structured Interviews

A greater depth and richer response detail was required to open up the enquiry and overcome some of the limitations of abstraction inherent in the Phase I stress survey. The search for a more 'authentic' understanding of the managers' unique experiences of stress within a hospital

environment, what they did and why, pointed to a more personalised in-depth semi-structured interview method. '*The qualitative methodologist must get close enough to the people and situation being studied to personally understand in depth the details of what goes on and must aim at capturing what actually takes place and what people say. The commitment to get close, to be factual, descriptive and quotive, constitutes a significant commitment to represent the participants in their own terms.*' (Lofland, 1971:28).

Phase II: Participants

9.3 In qualitative research the principles and assumptions about sampling are quite different from those relevant to quantitative research. Qualitative research is intensive with a small number of cases explored in depth. It is difficult to do effective qualitative research with very large samples of people since, as N increases, so does the difficulty of doing justice to the mass of qualitative material produced. In grounded theory and other qualitative research, informants or cases are selected on the basis of their theoretical significance rather than in accordance with rules of randomised or stratified sampling (Silverman, 2000). Accordingly, the process of sample selection for the present qualitative investigation was purposeful, theoretically defined and intended to reveal maximum 'relational and variational' evidence (Strauss & Corbin, 1990). Twelve participants were selected to maximise the opportunity to elicit information-rich data along the dimensions of interest i.e. with regard to the concepts of job-stressors, strain and coping, and the relationships between them.

9.3.1 Theoretical Sampling

Theoretical sampling means selecting a group to study on the basis of their relevance to your research questions, your theoretical position and the explanations that you are developing (Silverman, 2000). According to Strauss and Corbin (1990), theoretical sampling is sampling on the basis of concepts that have proven theoretical relevance to your evolving theory. People simply provide the means to obtain these data. This link between sampling and theory is further expounded by Bryman (1988:90) who argues that qualitative research follows a theoretical rather than a statistical logic: '*the issue should be couched in terms of the generalisability of cases to theoretical propositions rather than to populations or universes.*' Thus, the issue of whether the present sample of managers (n=12) is 'typical' or representative is not the critical issue. What is important is whether the experiences of these managers are typical of the broad class of phenomena (job-stress, strain and coping) to which the evolving theory refers.

9.3.2 Relational & Variational Sampling

The selection strategy also used maximum relational and variational sampling (Strauss & Corbin, 1990) where the aim was to find evidence of both relationships between concepts and a wide range of differences along the main dimensions of interest.

The Phase I survey results provided vital data to inform the selection of a theoretically representative sample and locate deviant and extreme cases on a continuum, e.g. *'high pressure/high strain'* category managers - *'high pressure/low strain'* category managers. The rationale for the choice of participants was that, although all twelve managers were reporting significantly high levels of job pressure, some were experiencing low levels of strain - implying that they were coping more effectively in some way that was important for the researcher to explore. Cases which might be unusual or exceptions e.g. a manager reporting low levels of strain yet working over 60 hours per week, were also sampled to challenge emerging hypotheses. Thus, by purposefully selecting a small sample using criteria derived from the Phase I results, the researcher expected the qualitative analysis to yield:

- Conceptual and theoretical categories along the dimensions of interest, e.g. job pressure, stressors, moderators, strain, coping.
- An understanding of the particular process or phenomenon e.g. job stress in NHS managers, how some stay healthy despite high levels of pressure.
- Cases that might be exceptions in an attempt to challenge or refute emerging hypotheses.

Phase II: Materials

9.4

- Invitation to participate in the qualitative Phase II of the study (Appendix H)
- Information on interview procedures, themes, anonymity, analysis (Appendix I)
- Informed consent form (Appendix J)
- Interview guideline (Appendix K)
- Tape recorder

Phase II: Ethical Issues

9.5 A political and personal sensitivity together with respect for the individual were particularly important because *'qualitative methods are highly personal and interpersonal, because naturalistic inquiry takes people into the real world where people live and work, and because in-depth interviewing opens up what is inside people - qualitative inquiry may be more intrusive and involve greater reactivity that quantitative methods'* (Patton, 1990:84). In addition, assuring the managers of confidentiality and anonymity was paramount. The discussion topic, i.e. 'stress', required careful handling so as not to leave the managers distressed in any way. Pilot interviews were utilised to identify, adjust or remove any overly intrusive questions.

Phase II: Pilot Study

9.6 Pilot interviews were essential to ensure that the interview schedule was effective in obtaining the data necessary for a rigorous and valid study. One 'high pressure/high strain' category manager and one 'high pressure/low strain' category manager were personally invited to participate in pilot interviews and give feedback. The interviews aimed to collect data comprehensively and systematically. The prepared interview schedule provided some structure whilst allowing considerable flexibility in participant responses. Questions were based on concepts derived from several sources including: the Phase I survey findings, the literature, and the researcher's experience. Since the concepts did not yet have proven theoretical relevance to the evolving theory of the qualitative enquiry, they were considered provisional (Strauss & Corbin, 1990). Nevertheless, they provided a beginning focus based on the following themes: general managerial demands; experience of management restructuring; pressures associated with the home/work interface; survey items such as the 'assignment of new and unfamiliar duties'; job pressure consequences; coping strategies; and workplace support.

The pilot study enabled the interviewer to become familiar with the questioning format, time pressures, recording, and the appropriate level of sensitivity to bring to the process. A written framework (Appendix K) was developed to aid participant discussion of coping and support. Two 'fun' questions were included to close on an amusing note and lighten up the process, for example, participants were asked for a metaphor describing the organisation as they currently saw it and how they would like to see it in the future (Appendix L). The pilot schedule was too lengthy and cumbersome and was subsequently reduced for the main interviews. Logical gaps in the questions were closed.

Phase II: Procedure

9.7 Twelve managers were approached and personally invited to participate in the semi-structured interviews of Phase II of the study of job stress in NHS managers. A covering letter provided feedback on the key survey findings from Phase I. In addition, prospective participants were given information about the interview process including, how and why they had been selected, the key themes to be explored, and possible benefits for the individual, organisation and researcher. Participants were reassured that the interview data would be incorporated into the research findings as aggregated perceptions and that individual responses would not be identifiable.

One year after the Phase I survey, the face-to-face interviews took place in the researcher's office within the hospital Occupational Health and Safety Unit. Participants were asked to sign a consent form confirming that they had read the information sheet, understood the nature of the study, the process of analysis, and possible publication of the study. After reassuring the

participants that their anonymity would be strictly protected, their permission to record the interviews was requested. The researcher emphasised that each participant could stop the tape, ask for clarification and withdraw from the interview at any time. In addition, it was stressed that the recordings would be used for research purposes only, kept secure, wiped clear or returned to the participant on completion of the research.

The sequence and wording of questions proceeded flexibly during the interviews. The interviewer was alert to the pressures of obtaining data within a limited time frame whilst maintaining a conversational, interested and not overly intrusive style, and guiding the interview in the direction of the main themes. As each interview progressed, the researcher was alert to any evidence of distress and monitored carefully each subject's psychological state. Each interview proceeded for about one hour. Participants were debriefed at the end of their interview and their feedback was noted. The researcher also recorded her interpretations of the main emerging categories immediately after each discussion. The interview schedule was adapted using feedback from each ensuing interview.

The interviews were transcribed verbatim. Transcription was a lengthy process but it allowed the researcher to become very familiar with the verbal data. Central themes and points-of-interest were noted in reflexive memos during transcription. The transcript data were then analysed using a broad grounded theory approach described below.

Phase II: Qualitative Analysis: Grounded Theory (Overview)

9.8 Introduction

Before applying a broad grounded theory approach to the analysis of the verbal transcript data, a brief outline of its defining characteristics, epistemological biases, and methodological procedures will bring it into clearer focus and place it within the context of wider developments and debates in qualitative inquiry. The researcher outlines her epistemological position within the constructionist revision of the grounded theory approach, and discusses some of the strengths and limitations of grounded theory.

In the present study, the attractions of utilising a grounded theory approach are as follows:

- The grounded theory approach to qualitative research is particularly suited, though by no means restricted, to the illumination and clarification of local interactions and meanings as related to the social context in which they actually occur (McLeod, 2003).
- It allows an interpretive understanding of the nature of the job stress process for the managers, eliciting a fresh look at existing concepts rather than relying on a priori assumptions of the phenomenon.
- It offers a process approach in which to study the managers' stress emotions, coping and appraisals.
- From a technical or pragmatic consideration, the grounded theory method offers an explicit set of procedural steps for systematically analysing unstructured data such as interview transcripts of the managers' job-stress accounts.
- It offers a method for the generation of knowledge to enhance the well-being of the healthcare managers in the workplace.

9.9 Grounded Theory: An Approach And Method

The term 'grounded theory' is used to describe sociologists Glaser and Strauss's (1967) **method** for the systematic analysis of unstructured qualitative data drawn from interviews, observations or textural material (an iterative method orientated around the principles of theoretical sampling and constant comparison). It is also used to refer to a stance or an **approach** to theory generation, where theory is generated from and grounded in the data derived from experiences, accounts and local contexts. For Strauss & Corbin (1994), theory consists of a set of plausible relationships produced among concepts and sets of concepts or categories.

As an approach within the qualitative paradigm, grounded theory specifies that new developments in both substantive and formal theorising can be facilitated by the close and detailed (well-grounded) inspection of particular problem domains, participants' accounts and their associated phenomenological and social worlds. This was advocated by Glaser and Strauss (1967) as a way of breaking out of the confines of empirical research that had been exclusively

reliant on quantitative methods and preoccupied with the testing of a priori 'grand' theory. Grounded theorists focus attention upon the way in which scientific research is concerned with issues of discovery or 'generativity.' In epistemological terms, generativity and grounding in the grounded theory approach flow from a concern with the contextual specificity of meanings, sometimes described as 'contextualism' (Jaeger & Rosnow, 1988). The aim of this strand of qualitative analysis is the production of a meaningful account that knits together the multiplicities, variations and complexities of participants' worlds (Henwood, 1996). This is referred to as seeking to construct intersubjective meaning or *Verstehen.*

The idea of verstehen in grounded theory overlaps to some degree with interpretive phenomenology (Schutz, 1962), which orientates psychological enquiry towards everyday understandings, human subjectivity and emotions (Denzin, 1984). Grounded theory is also underpinned by the symbolic interactionist perspective of Herbert Blumer (1969) and the case study approach of the 1920s Chicago school of social psychology. Symbolic interactionism focuses on the meanings of events to people in natural settings derived through social interaction, and leads the researcher to look at self and meaning as processes.

9.10 Epistemological Issues

A grounded theory approach to qualitative research involves not just an appreciation of a particular method but also epistemological issues that have to do with the intrinsic relationship between subjectivity and objectivity in research. In turn they are part of a wider debate about human inquiry and the social construction of scientific knowledge (Denzin & Lincoln, 1994).

One of the main confusions or criticisms of grounded theory is that the epistemological positions of this approach stem from three different philosophical roots. To date, grounded theorists have not explicated a shared set of epistemological premises. Researchers from varied backgrounds with diverse research problems can use the strategies of grounded theory. In epistemological terms, grounded theory approaches may vary from: positivist or objective realist (Strauss & Corbin, 1994), to critical realist (Pilgrim & Rogers, 1996) and social constructionist (Charmaz, 1990; Henwood, 1996), and these stances are considered below.

9.10.1 Origins And Developments Of Grounded Theory

Firstly, the early work of Glaser and Strauss (1967) claims to be phenomenological yet a strong positivist thread runs through their work (Charmaz, 1990). Although grounded theory was founded upon a critique of the technical appropriateness of quantification in research in the human sciences (for context stripping, exclusion of meaning etc), it did not challenge the received view (experimental, hypothetico-deductive or positivist) of scientific inquiry in and of itself (Henwood, 1996). The traditional or 'objective realist' perspective assumes that essential, true entities exist in the world and it is the aim of objective scientific methods to *discover* those

truths in an effort to justify a priori theory. Locke (2001) notes that the use of language such as 'emergence,' 'discovery,' and theory grounded in 'reality,' in Glaser and Strauss' (1967) original monograph, '*The Discovery of Grounded Theory*,' is strongly suggestive of an 'objective realist' perspective i.e. they imply that a set of social or psychological relationships exist objectively in the world, are reflected in qualitative data, and are there to be captured by the researcher. On the positivist side, the early work of Glaser and Strauss leans toward assuming that theoretical categories derive from the data and the researcher remains passive. The researcher's role and the language through which they construct the social reality that they study are taken for granted (Denzin & Lincoln, 1994).

Secondly, a contrary epistemological view lies in grounded theory's search for understanding and phenomenology that it is 'concerned with the individual's particular account of reality, rather than an objective reality itself' (Smith, 1995:122). This 'critical realist' position (Pilgrim & Rogers, 1996) acknowledges the material reality of objects in the world, but attends to the fact that our perceptions and experiences of these phenomena cannot be objective experiences. Objects are always experienced through individually and socially mediated processes. This position recognises that participants' accounts are mediated by their own and the researcher's interpretations. However, they have some relation to the actuality they describe. Glaser and Strauss's phenomenologically inspired position emphasised going directly into the world of 'everyday' experience, for example, they visited hospitals to study individual's expectations of death from first hand observations and interviews.

Thirdly, partly in response to the above and in an attempt to reduce the ensuing confusion and misinterpretation of the method, a social constructionist revision of grounded theory was introduced by Charmaz (1990) and elaborated by Layder (1993), and Henwood and Pidgeon (1995). A broad constructionist epistemology assumes that knowledge is generated within networks of social activities and systems of socially constituted meanings (Henwood and Pidgeon, 1995). This position assumes that there are very little that is a true, unchanging entity and that our perception and ability to invoke meaning is crucial to understanding experience, reality and identity. This view acknowledges the multiple dimensions of subjectivity in research.

Charmaz' (1990) constructionist revision and application of grounded theory draws on assumptions from both symbolical interactionism and phenomenology. Such a view assumes an emergent reality fundamentally shaped by social interaction. She sees her approach as offering an open-ended and flexible means of studying both fluid interactive processes and more stable social structures (Charmaz, 1990:1161). In the case of grounded theory, this leads to a research model that is flexible, carried out in everyday contexts, and has as its goal the co-construction of participants' symbolic worlds and social realities (Pidgeon, 1996:77).

9.10.2 Constructionist Revisions Of Grounded Theory

The constructionists went on to criticise early grounded theory for its apparent naïve view of inductivism - theory cannot simply 'emerge' from data because all observation is pre-interpreted in terms of existing concepts (Henwood & Pidgeon, 1995). The critical roles played by existing theory and the concepts that guide and sensitise the researcher to certain aspects of a body of data were left largely unexplicated by Glaser and Strauss, despite their acknowledgment that 'the researcher does not approach reality as a tabula rasa' (1967:3). In order to begin and facilitate analysis, the researcher needs some theoretical resources or *theoretical sensitivity* to guide the process of interpretation and representation (Riessman, 1993).

In addition, what appears to be the 'discovery' or 'emergence' of concepts and theory is the result of a constant interplay between data and the researcher's developing conceptualisations - a 'flip-flop' between ideas, researcher experience and theoretical sensitivity (Bulmer, 1979). Hence, grounded theory analysis uses an informed rather than a naive inductiveness to formulate theory from unstructured verbal data. This *iterative process* is described as one of theory generation rather than one of discovery (Henwood & Pidgeon, 1992).

Consequently, the constructionist revision of grounded theory incorporated the notion of theoretical sensitivity and the iterative process of theory construction. The revision also emphasises that data should *guide* but not limit theorising (Layder, 1993), and that *'everyday'* understandings can be interpreted in terms of wider social contexts and power relations (including the contexts and dynamics in the research setting itself).

The constructionist's understanding of grounded theory method appears inconsistent with the positivist concern with discovering universally applicable laws of structuring principals to explain behaviour, and with the elimination of personal subjective judgment expressed in notions such as verification and testability. Rather than method being a tool that when followed eliminates human judgment, constructionism conceives method as a tool to assist judgment. There is a tension between the constructionist interest in the first-hand subjective experience of those being studied and their equal interest in constructing an external, even objectified account of that experience (Denzin, 1992). Constructionists attempt to take into account researcher perspective as they accept that researcher agency in formulating judgments cannot be eliminated. Consequently, researchers attempt to be 'up front' with their readers and confess their values and interests (Van Maanen, 1988). A grounded theory researcher must have and disclose a *perspective* from which they seek to actively build their analysis but without merely 'applying' it to new data.

9.11 The Present Study: Epistemological Stance and Researcher Perspective

It is evident that the paradigm lines within grounded theory are not always clearly drawn. When they are, they are determined more by the commitment of the individual researcher than by the operational practices of a research approach (Locke, 2001). Thus, in a grounded theory analysis, the researcher is required to lay out her epistemological premises and speaking position to help clarify the relation between the subjective and objective, sharpen the research process, and delineate the theory of reality to which she subscribes. The disclosures of the researcher perspective include the substantive interests that guide the questions to be asked, a philosophical stance or a school of thought that provides a store of sensitising concepts, and the researcher's own personal experiences, priorities and values. Other issues to be disclosed include the professional, emotional and political commitments of the researcher, and the role of power relations or politics in the research process.

9.11.1 Speaking Position

In the present Phase II qualitative study of job stress amongst NHS managers, the researcher adopts the version of grounded theory based on the revised social constructionist perspective. This epistemological stance assumes that in the sphere of social and psychological inquiry, there is no fixed external reality to be 'objectively' known but a fluid 'social reality' which is co-constructed (Gergen, 1985). The task of the researcher is to construct a version of this social reality. One of the implications of this stance is that the qualitative researcher does not claim to generate 'universal' truths or scientific laws, but rather strives to build meaningful local knowledge. The constructionist version of grounded theory used in this study recognises the inevitable role of subjectivity and possible researcher biases in the analysis, with the outcome being a result of the interaction between the participant's accounts and the researcher's interpretive framework (Pidgeon & Henwood, 1996). Bias and subjectivity are not particular to qualitative research – all research needs to be mindful of the effect of the researchers own views and selective interpretations.

This constructionist application of grounded theory regards the process of categorising in theory generation as dialectical and active rather than as a given in reality and passively observed. The stance is that of an active researcher (not a neutral observer), whose decisions shape both process and product throughout the research. The researcher's interactions with the data seek to generate theoretical categories, analyse relationships between the key categories, and construct an analytic story or theory from the data. By starting with transcript data from the lived experience of the research participants, the researcher can attend to the managers' personal meanings and how they construct their worlds.

The stance of the grounded theory researcher is also one in which she delivers theoretical sensitivity to the analysis. With respect to the present study, the researcher brings her knowledge of stress theories and stress management, and her experience as a counselling psychologist helping employees who suffer from job stress. This store of sensitising concepts guides the questions to be asked and cues the researcher to be alert to the managers' constructions around stressors, strain, coping, and support in an NHS work environment. In addition, her experience as a cognitive behavioural psychotherapist enables the researcher to be alert to the managers' stress-related appraisals, beliefs, attitudes and stress emotions that would be difficult to access in a quantitative approach.

The methodological strategies of grounded theory help keep the researcher on an analytic path, while committing her to be wary of simply reproducing her pre-existing perceptions, ideas and concepts unchanged. When interviewing participants and analysing the data, the researcher attempts to maintain an openness to alternative interpretations of the data in order to allow the participants' own views to be articulated, views which might identify the strengths of existing stress models as well as their shortcomings. This helps bring a fresh look to existing concepts. The adopted stance of the researcher thus 'implies a delicate balance between possessing a grounding in the discipline and pushing it further' (Charmaz, 1990: 1165).

9.11.1 Researcher Interests And Potential Biases

The professional status and interests of the researcher within this NHS Trust also need to be made explicit. There is possible role ambiguity as she may be perceived as both an organisational researcher and a mental health practitioner. As a researcher she is seeking evidence on which to make recommendations to reduce and alleviate organisational stress. As a counselling psychologist in occupational health, she is contracted to address and support mental health and well-being within the Trust. Although her professional position is distinct from the NHS managerial group under study, there is some involvement when the managers are off sick and seek help from the staff counselling service. In addition, the researcher negotiates with managers regarding rehabilitation, working conditions, and support for their staff. Thus, having an interest in the mental health of the organisation and the individuals within that organisation (including herself), the researcher risks making assumptions about stress, her professional practice and experience, and the relevance this has to the experience of the research participants. Accordingly, she has ensured that the study is overseen at all stages by a supervisor who has no investment in the study, allowing him to identify any unacknowledged assumptions, biases or blind spots.

9.11.3 Political Issues

Qualitative studies often tackle personal and social issues, and the engagement and experience of the participants, in this case healthcare managers, might be seen to have a political dimension (Hammersley, 1995) within an NHS environment. However the degree to which the qualitative research process is political is no greater than with any form of psychological research. One difference is that the interpretive aspect is recognised in qualitative methodologies, including grounded theory, and made as transparent as possible. Qualitative methodologies also allow for attention to be paid to aspects of the political that are not easily translated into numeric, quantitative symbols. With respect to job stress in healthcare managers, the political dimension of the present study can be placed within the context of perceived increased workplace demands arising from endless government reforms and limited resources within the NHS.

In addition, the researcher cannot just assume that a qualitative approach to research will attain recognition in the workplace. Maximum persuasiveness is required to make a case to the Trust management board for stress management interventions that have some resource implications. This is one argument for having numerical data (Phase I) backed up by rich description (Phase II), i.e. a principled mixture of quantitative and qualitative methods (Silverman, 2000).

9.12 Phase II: Grounded Theory Method And Procedures

The analysis of the interview transcripts in the present study draws on the 'grounded theory' method developed by Strauss & Corbin (1990) and extended in the constructionist revision by Charmaz (1990) and Henwood & Pidgeon, (1995, 1996). The set of procedures is suitable for use with any form of unstructured material, including interview transcripts of participants' accounts. The method seeks to generate theory or an analytic story, through the close inspection and analysis of qualitative data, that is, from the ground up, not forced on the data through preconceived ideas from above. The researcher engages in a close, detailed, line-by-line, inspection and systematic analysis of the transcript data, subjecting the material to increasing levels of conceptualisation. The focus is not merely on ordering the mass of verbal data, but on organising the high level categories or ideas that are generated from the analysis into a coherent explanation of the phenomenon, job stress in NHS managers. Making sense of the mass of unstructured textual data requires successively evolving interpretations during the course of the study to obtain a relatively high level of abstraction. This requires a special openness and flexibility upon the part of the researcher (Pidgeon, 1996).

Straus & Corbin (1990) present a number of qualitative data handling strategies that encourage the organisation and systematisation of the research process. This involves the researcher systematically coding, indexing and categorising data, and limiting theorising until patterns in the data are generated from the categorising operation, as follows:

- Attaching conceptual labels to meaningful chunks of data **(coding).**
- Producing **reflexive memos** and logic diagrams to keep track of emerging concepts and links to existing theory.
- Making **constant comparisons** of the similarities and differences between cases and categories to fully explore and capture the variation and complexity of the data.
- Grouping and labelling similar incidents and events to form **categories** at higher levels of conceptualisation.
- Identifying patterns and relationships between categories, forcing the analysis from descriptive to more analytic levels.
- Systematising and solidifying connections to develop local or grounded theoretical patterns that help explain aspects of the phenomenon under study.
- Theoretical sampling of new cases where new data is likely to extend the generation of theory.
- Selecting a **core category** and relating all major categories both to it and each other to develop an analytic story, narrative or theory.

9.12.1 Iterative Procedures And Theoretical Sensitivity

In order to keep both the research process and theory grounded in the data rather than overly drawn from existing theories, the researcher simultaneously collects data and undertakes analysis. Although the literature review may be delayed in grounded theory analysis, it is important to be aware of how the data relate to established theory. This methodology requires a constant interplay between data and the researcher's developing conceptualisations, an iterative process that serves to control the degree to which existing formal theory structures the research process.

In addition, the method allows for the researcher's perspectives, personal experiences, values and substantive interests to guide the questions asked and bring a store of sensitising concepts to the analysis. According to Charmaz (1990) this brings an informed theoretical sensitivity to nuances or subtleties of meaning within the data. It helps stimulate the development of new insights and enables the analyst to see the research situation in new ways, enhancing the data's potential for developing substantive theory.

The grounded nature of this research strategy is thus three fold:

1. The researcher attends closely to the data.
2. The theoretical analysis builds directly on the researcher's interpretations of processes within those data; and
3. The researcher ultimately compares her analysis with the existing literature and theory.

The purpose of these strategies is simultaneously to liberate and discipline the theoretical imagination in a way that facilitates the development of conceptually dense representations, referred to as theoretical, rich or 'thick' description (Henwood & Pidgeon, 1992).

9.13 Setting Achievable Goals

The goal of grounded theory is to build comprehensive theoretical systems from purposefully sampled sets of relevant cases. According to Charmaz (1990), a theory explicates phenomena, specifies concepts that categorise the relevant phenomena, explains relationships between concepts, and provides a framework for making predictions. However, this may be too ambitious depending on time and resources available, and researchers are advised (Henwood & Pidgeon, 1996) to define achievable goals for their research project. In the present study, the researcher aims, at least, to achieve the following goals that do not necessarily require the building of a 'total' theory:

- Basic taxonomic development of relevant features of the corpus of data through the basic process of coding and defining aspects of textual material (may be set as a project goal in its own right).
- Focused conceptual development of a limited set of categories i.e. 'saturation' (Strauss & Corbin, 1990). Typically selected because they are of particular relevance to the problem under investigation.

Focused conceptual development generates depth of vision, as opposed to taxonomies that secure breadth of coverage. Both are aims of the present study and serve to provide a conceptual framework to aid our interpretive understanding of the job stress phenomena.

9.14 Computer Aided Qualitative Analysis

The present study adopts a computer-aided analysis of the qualitative data (CAQDAS) that offers several advantages to the researcher. Richards & Richards (1991), who developed the first CAQDAS software, were specifically influenced by the ideas of grounded theory. Computer software can help demonstrate that the researcher's conclusions are based on rigorous interpretive analysis, addressing issues of validity and reliability by the use of systematic, reproducible, explicit procedures, consistent coding schemes, simple counting and searching for deviant cases. It offers the advantages of electronic storage, filing and retrieval, and speed of handling of contextual data, freeing the researcher to explore analytic questions. The searches and constant comparative method for generating theory can be understood as involving continual tests of ideas against data that can be carried out on the computer.

However a number of cautions are in order. The software is essentially a toolkit, an aid to analysis. It does not displace the researcher or the research analysis as the central area of activity, but rather supports the processes that the researcher engages in. The complex and multifaceted activities involved in interpretive analysis remain human functions. *The researcher does the thinking, not the software.*

Strengths And Weakness of Grounded Theory

9.15 Strengths

The past decade has seen an increased interest in and acceptance of qualitative methods in the social sciences and psychology reflected in specialist texts on qualitative approaches, including grounded theory (Strauss & Corbin, 1997; Frommer & Rennie, 2000; McLeod, 2001). There are numerous published studies using the grounded theory approach to investigate stress, for example: an exploration of work stress in junior healthcare managers (Rodham & Bell, 2002); exploration of stress and coping among law enforcement officers (Lombas, 2002), and employed mothers (Kushner & Harrison, 2002); understanding work beliefs of non-profit executives (Wilensky & Hansen, 2001); professional women and stress (Brown, 1999); multiple career identities (Gerstman, 1999); exercise consistency and its psychological benefits (Hed, 1997). Glaser and Strauss (1990) attempted to demonstrate that the strengths of the strategies of grounded theory:

- Bring the researcher close to the basic processes and issues that the subjects experience.
- Provide a method for identifying, capturing and rendering processual rather than static analyses.
- Foster a rigorous qualitative methodology with its own integrity and intrinsic values distinct from quantitative research.
- Offer possibilities of moving qualitative research more definitely toward dense, durable, substantive and formal theories (Charmaz, 1990).

Generally much qualitative research depends on implicit method and thus relies on the researcher's intuition and talent. In contrast, grounded theory specifies an explicit set of analytic guidelines and procedures that can help the qualitative researcher develop more or less fruitful conceptualisations of the data. Using the grounded theory method to study job stress in NHS managers in the present study offers strategies for systematically organising, focusing, handling and analysing large amounts of verbal data in ways that render it conceptually, and in turn move the emergent conceptualisations toward more general statements and an analytic story. Such statements may help deepen our understanding of the experience of job stress. In addition, they may supplement, validate, explain, illuminate or reinterpret the quantitative data gathered from the phase I quantitative survey.

The grounded theory approach to qualitative research is particularly suited, though by no means restricted, to the study of local actions and interactions and the meanings people place on events processes and structure of their lives, their beliefs, values, attitudes and assumptions as related to the social context in which they actually occur (Van Manen, 1977). According to Strauss & Corbin (1990), grounded theory is a *transactional system* of analysis in that it assists the researcher to examine and link related conditions, actions, interactions and consequences to the phenomenon under study. It is a *process* approach rather than a product-orientated approach, allowing for change over time and allowing participants to tell their story as they see it. As such, grounded theory offers a useful approach for exploring the transactional nature of the stress process and its constructs in terms of the managers' appraisals, perceptions of stressors, coping mechanisms, stress emotions, and their personal meanings of job strain and support.

Grounded theory research aims for analytic power and conceptual grasp that synthesizes, explains and interprets the data. The rigour of the grounded theory method depends upon developing the range of relevant conceptual categories, saturating (i.e. filling, supporting and providing repeated evidence for) those categories and explaining the data (Charmaz, 1990). As a process, the analysis can be fluid, constantly refined and modified. The grounded theory approach provides the possibility of theory development, and qualitative data have been advocated as a valuable strategy for developing hypotheses.

Grounded theory has a pragmatist philosophical heritage (Locke, 2001). Its strategies can yield rich data, elaborated categories and dense analyses with applications across substantive fields, for example, as the basis for practical stress-reducing recommendations in the present Trust. These strategies do not yield statistically verified results that require random sampling of a clearly identified population. However, survey results may test the reported grounded theory through standard logico-deductive verification procedures.

With regard to the respective merits of quantitative and qualitative research, grounded theory methods are thought to meet a number of reservations concerning the uncritical use of quantification; in particular they address the problem of inappropriately fixing meanings where these are variable and renegotiable in relation to their contexts of use. In addition using such methods can help to avoid the problem of overwriting internally structured subjectives with a priori systems of meaning e.g. with standard survey instruments. Qualitative methods can also bring the relationship between researcher and researched more into view. However, the strength of grounded theory rests on the competence with which the analysis is carried out. As with quantitative studies, the quality of grounded theory research varies according to methodological thoroughness, significance of research questions, and incisiveness of analysis (Charmaz, 1990).

9.14 Weaknesses Of Grounded Theory

There are potential weaknesses in using the grounded theory method. These weaknesses may be found in most other types of qualitative research, and in quantitative research as well, including: premature commitment to a set of analytic categories, unnecessary jargon, and a lack of clarity about key terms such as theory, category and saturation. Qualitative theorising may remain discursive and imbedded in description, which may reduce it to a loosely integrated conceptual framework.

However, the main problems with the grounded theory approach lie in glossing over its epistemological assumptions and in minimising its relation to existing theory. The relation between subjective and objective realities and levels of explanation remains unspecified, and ways in which researchers use their prior theoretical perspectives remain somewhat ambiguous (Charmaz, 1990). Glaser and Strauss' (1967) grounded theory approach was presented as having both phenomenological and positivistic roots, which leads to confusion and misinterpretation. The constructionist revision of grounded theory reveals a more actively involved researcher who constructs categories and concepts, incorporating theoretical sensitivity and an iterative process. This approach acknowledges the multiple dimensions of subjectivity in qualitative research and is concerned to ground the generated knowledge in the participants' own worlds. In a move towards stronger objectivity, the researcher makes public the interpretive process of knowledge production and researcher perspective. However, the difficulties of producing strongly objective accounts with grounded theory have yet to be worked through (Pidgeon, 1996), and the knowledge is presented in terms of multiple, partial and competing interpretations.

While the interplay of various forms of subjectivity, interpretation and researcher perspective is fore-grounded in qualitative research, it is a feature of all forms of scientific practice, which raises questions of how to assess the relative merits of the outcomes of research. The implication of the foregoing argument is that there is no simple answer to the problem of evaluating grounded theory or any other qualitative approach. The question of how to ascertain the validity or 'goodness' of qualitative research is a difficult one (Henwood & Pidgeon, 1992). One view is that it is inappropriate to assess interpretive qualitative research by the standard canons of quantitative research. According to the principles of the positivist paradigm, qualitative research will always be found wanting or viewed as a precursor to 'proper' quantitative research. Rather, alternative criteria must be sought that are sensitive to the epistemological priorities, commitments and methodology of qualitative research.

Miles and Huberman (1994) propose several criteria to help determine the 'goodness' or quality of the finally emerging conclusions in qualitative research, where goodness means possibly or probably true, reliable, valid, dependable, reasonable, confirmable, credible, or useful. Their shared standards of goodness criteria include: objectivity/conformability, reliability/ dependability/auditability, internal validity/ fittingness, utilisation/action/orientation. Seen as guidance for good scholarship in qualitative research rather than as the ultimate arbiters of 'truth' these practical suggestions appear less problematic. These criteria are considered in Chapter 13 with respect to evaluating the present Phase II qualitative study.

Chapter 10: Phase II - Analytic Procedures

Implementation Of Grounded Theory Procedures With The Aid Of CAQDAS (Computer Assisted Qualitative Data Analysis)

10.1 Introduction

This section illustrates the use of a grounded theory approach to generate a theory through the broadly inductive examination of data from twelve verbatim case transcripts. The aim was to begin with descriptive data and, through the 'constant comparative method,' subject the material to increasing levels of conceptualisation. The analysis was supported by the use of **N4 computer software**[8] which helps to manage the documents and data, generate codes, search and retrieve segments of information, and ask questions to test theory generation.

Grounded theory lays out a set of flexible procedures for the difficult task of rendering qualitative data meaningful, both in its own terms and in relation to the researcher's theoretical aims and interests (Charmaz, 1995). These procedures are not rigid tactics or rules, a degree of selectivity is expected on the part of the researcher. What matters is that the analyst uses grounded theory or other strategies to engage actively in a close and detailed analysis of the data in order to both stimulate and discipline the theoretical imagination (Pidgeon & Henwood, 1996). The challenge, according to Miles and Huberman (1994:56) is '*to be explicitly mindful of the purpose of your study and of the conceptual lens you are training on it – while allowing yourself to be open to and re-educated by things you didn't know about or expect to find. At the same time, in collecting data it is important to resist overload – but not at the price of sketchiness.*'

Thus, although grounded theorists use maximum flexibility in analysis, it is helpful to chart a number of steps in moving from the collection of unstructured data through to theoretical outcomes. Key analytic steps in the Phase II analysis are described below.

Stages In Grounded Theory Analysis

10.2 STEP 1: Document (Textual Data) Preparation

Before the analysis can proceed, the corpus of data must be prepared for import into the N4 computer system. To facilitate this process, interview data are transcribed in a particular format and saved as 'Text only with line breaks.' This subdivides a document into text units which are numbered sequentially by N4 to aid coding, search and retrieval. Each document is given a coded header, subheaders and sections. These devices facilitate the coding of section-defined topics, standard questions and answers, together with text and index searches which aid the comparative analysis of responses for each subject.

[8] N4 stands for NUD*IST revision 4, and NUD*IST stands for Non-numerical Unstructured Data* Indexing Searching & Theorising. Published by Scolari (2000), a division of Sage Publications, London. www.scolari.co.uk

10.3 STEP 2: Coding Textual Data (The Importance of Concepts)

Grounded theory methodology seeks to generate and develop concepts and categories in order to produce delimited theories grounded in data. Concepts are the basic units of analysis as '*Theory consists of plausible relationships produced among concepts and sets of concepts*' (Strauss & Corbin, 1994:278). In the analytic process, concepts are given names or '*codes.*' Coding represents the operations by which the data are broken down, conceptualised and put together in new ways. Codes act as efficient data-labelling and data-retrieval devices. Strauss and Corbin (1990) describe three types of coding which take place at different levels of abstraction: **open coding, axial coding,** and **selective coding.** With respect to the present study, these coding operations are described below.

10.4 STEP 2: Open Coding

'Open coding' is the initial unrestricted labelling of concepts in the text (see Fig.1 below). In coding, the researcher attempts to conceptualise and develop the abstract meaning of discrete observations or incidents in the text. Codes represent the researcher's interpretation of what is happening. Using a set of guidelines for open coding (Strauss, 1987), the researcher begins by constantly questioning the data, line-by-line, e.g.What is happening here? What category or aspect of a category (a concept) does this incident suggest? The use of generative questions (Fig.3) encourages the process of opening up the data to a wide range of multiple interpretations i.e. 'running the data open' (Glaser, 1978).

10.5 Types of Codes And Conceptual Categories

Codes can represent different levels of analysis. They can be simple, complex, descriptive or inferential. Descriptive categories are useful for organising and comparing data. However, conceptual categories involve a reflection of the data which the researcher brings through interpretation, and represent a new view of the data, for example, 'the pit and the pendulum' metaphor of the stress process. Types of codes utilised in this study include:

- Descriptive codes - attributing a class of phenomena to a segment of text. Factual, entailing little interpretation e.g. gender, age group, marital status.
- Heuristic codes - reflecting the researcher's theoretical pool of concepts, inferences or interpretations. May be drawn from literature, the researcher's discipline or the project itself e.g., 'professional identity,' 'self-efficacy,' the 'fit' manager.
- In vivo categories – words or phrases used repeatedly by the interviewees point to regularities in the setting and emphasise their own constructs e.g. 'people-person.'
- Pattern codes - more inferential and explanatory, illustrate emergent patterns of relationships or themes e.g. 'expectations of the self as a manager.'

Figure 1

Examples of:

(a) **Computer Aided Open Coding (N4)**
(b) **Constant Comparison - two male managers - one working over contracted hours, one choosing not to work over contracted hours**

```
*******************************************************************************
Q.S.R. NUD.IST Power version, revision 4.0.
Licensee: Dinah Jenkins.
PROJECT: MANAGERS, User Dinah, 3:39 pm, Mar 8, 2002.
*******************************************************************************
(I 86)                  //Index Searches/Working over contracted hours males
*** Definition:
Search for (COLLECT (5 189)). Only documents coded at (1 1 1).
```

```
Margin coding keys for selected nodes:
A: (5 189 1) ~GENERAL PRESSURES/working over contracted hours/CAUSES
B: (5 189 2) ~SUPPORT/ supporting others
C: (5 189 3) ~COPING/survival
D: (5 189 4) ~PRINCIPLES/honesty
E: (5 189 5) ~EMOTIONS/undervalued
F: (5 189 6) ~ORGANISATION/leadership style
G: (5 189 7) ~BELIEFS/give my all
H: (5 189 8) ~MOTIVATION/career advancement
I: (5 189 9) ~PRINCIPLES/obligation
J: (5 189 10) ~PRINCIPLES/duty
K: (5 189 11) ~PRINCIPLES/commitment
L: (5 189 12) ~BELIEFS/could change things
M: (5 189 13) ~BELIEFS/must do the best I can
N: (5 189 14) ~ORGANISATION/cultural ethos
O: (5 189 15) ~working over contracted hours/work overload
P: (5 189 16) ~ACTION COPING/take work home
Q: (5 189 17) ~ACTION COPING/work weekends
R: (5 189 18) ~working over contracted hours/in the past
S: (5 189 19) ~METAPHOR/sinking ship
T: (5 189 20) ~ORGANISATION/cultural change
```

```
++++++++++++++++++++++++++++++++++++++++
+++ ON-LINE DOCUMENT: MANAGER:M6
+++ Retrieval for this document: 29 units out of 740, = 3.9%
91    *Q4:….What causes you to work long hours?

++ Text units 92-102:
92  It's a sense of obligation and duty I think. I clocked up one     A I J
93  time, I was doing 60-65 hours a week for the best part of 14 months. A
94  The commitment I think is firstly to myself, in the sense that I have a KJ
95  duty to do the best I possibly can. For instance, I liken it to a sinking
96  ship, if you just get off the boat, the ship sinks but there may be the S
97  ability to save it or at least delay the sinking, and get more people A BS
98  off and/or increase your chances of survival. And that kind of underpins C
99  the commitment side of it. Secondly, I feel I'm being paid to do a job,A K
100 and if I didn't give all that I felt I could give to that job then I AG
101 would be short-changing my employer and short-changing myself.   A   D
102 And there was at that time an insane belief that I could change it. A  L
++++++++++++++++++++++++++++++++++++++++

++++++++++++++++++++++++++++++++++++++++
+++ ON-LINE DOCUMENT: MANAGER:M3
+++ Retrieval for this document: 17 units out of 921, = 1.8%
156   *Q4: The survey found that managers here tend to work over their
157   contracted hours.  Has that been your experience?

++ Text units 158-165:
158   It has in the past, I don't do that any more, I probably work under  A R
159   my contracted hours. Well, I was undervalued and it didn't   A  E
160   progress my career particularly by working 50, 60 or 70 hours   A  H
161   a week. I didn't do it for the sake of it, for the sake of career A H O
162   advancement, I just had too much work. And so one just did it and  A F N
163   took it home and worked at weekends and that was the ethos, that was A N
164   how people worked, and the bosses worked like that. Now it's a    A  F
165   different sort of culture. A  T
++++++++++++++++++++++++++++++++++++++++
```

- Metaphors shift coding from facts to processes at the most inferential level e.g. 'political battleground,' 'weathering the storm,' 'burning the candle at both ends and in the middle.'

10.5.1 Computer-Aided Open Coding

N4 computer software was used to aid the assignment of codes to text units directly on screen. The researcher systematically coded and categorised twelve interview transcripts in the method described above. To keep track of and clarify meanings of codes, each is given its own numerical address, title and definition. Tentative ideas, memos and 'free' codes are moved and merged into a more organised index system.

10.5.2 Crafting The Index System

The index system aids the organisation of categories, enabling the researcher to quickly retrieve and cluster data with regard to research questions, hypotheses, constructs or themes. Codes are applied throughout the analysis. They are redefined or discarded when they appear inapplicable, overbuilt, empirically ill-fitting or too abstract. Most importantly, codes are used to draw together a lot of material for analysis. Thus, what begins as a formless collection gradually develops into a coherent, organised system of conceptual relationships and categories. *'An operative coding schema is not a catalogue of disjointed descriptors or a set of logically related units, but rather a conceptual web, including larger meanings and their constructive characters'* (Miles & Huberman, 1994:36). This system of codes is used in ongoing inquiry, searching, and theory building throughout the project's life.

10.6 STEP 3 - Constant Comparison Method

Theoretical ideas are generated through the **constant comparison method.** As the transcripts are scrutinised, incident is compared with incident so that similar phenomena can be given the same name or conceptual label (Fig.1). Concepts pertaining to the same phenomenon are grouped together under a higher-order, more abstract concept called a 'category.' This helps the researcher to clarify what is uniform and stable in the data, reduces the number of units with which she has to work, and makes the process more manageable. For example, in the computer printout of Fig.1, quotations from two male managers 'working over contracted hours' illustrate several different conceptual components of the **category** 'long hours culture' such as 'too much work', 'that was the ethos,' 'duty', 'commitment', 'belief I could change it!'

Questions raised here by the researcher include: Does the 'long hours culture' help explain the different health outcomes for these managers? Is it a cause or an effect? Do the managers work long hours because of 'enormous workloads' or maladaptive coping strategies? These tentative questions are stored in **memos** in N4. Memoing provides a space where thinking about the data can be less structured and more creative, capturing the thoughts of the analyst in the moment.

Memoing serves a clustering function, pulling together incidents that appear to have commonalties, developing key categories, showing relationships and building toward a more integrated understanding of events, processes and interactions (Miles & Huberman, 1994:75).

The category 'expressing emotion' helps illustrate the process of constant comparison, showing **similarities and differences** in the expression of distress and tears in the workplace according to gender:

Categories: expressing emotion/distress/tears/gender stereotypes
Female Managers

'As a woman, I tend to get stressed and then my emotions come out in tears, and I think that is a real woman's thing! I mostly try and suppress my tears, but I will wear my heart on my sleeve if I have a problems.'

'It's usually when I go home and I usually cry, walk my dogs, maybe read a book – it's more a distraction than anything.'

'There have been a couple of times when I've found it very difficult to function without becoming quite emotionally upset when I'm actually talking about the problems that relate to work.'

'Sheer unadulterated temper! Because I'm not a weepy sort of person at all. If my back is against the wall, I come out all guns blazing. I don't fall apart and burst into tears or anything like that.'

Male Managers

'I remember my boss getting furious with me about a particular issue and nearly reducing me to tears but not quite. Just his personal anxieties and angers being dumped on me.'

'I think my instincts, I wanted to lash out, but my professionalism contained that. My second reaction was complete and utter disbelief. I was very near to tears, I remember and struggling to keep it all together.'

'The thing that has really upset me most since I've been here is when my integrity or objectivity has been questioned.'

10.7 STEP 4: Developing Categories In Terms Of Dimensions And Properties

The process of open coding stimulates the discovery not only of categories but also of their properties and dimensions. Properties are attributes or characteristics of the phenomenon. Dimensions are the location of properties along a continuum. Fig.2 illustrates some of the properties and dimensions of the category **'support'** in this study.

Fig.2

Category	Property	Dimensional Range
SUPPORT		(Applied to each incident)
	Frequency required	often .....never
	Value/importance	high.....low
	Availability	high.....low
	Organisational	formal....informal
	Domestic	few.....many
	Utilisation	often.....never

According to Strauss and Corbin (1990), dimensions and properties of a category are important because they form the basis of relationships between categories and subcategories under a given set of conditions. For example, a manager who has access to formal and informal organisational **support**, which he/she values highly and utilises occasionally, tends to experience lower levels of strain. Fig.3 illustrates some of the generative questions put to the data in order to open up the category **'support'** to a wide range of interpretations, dimensions and properties.

Fig.3

Generative Questions	Properties Of 'Support' Category	Dimensions
Availability of workplace support?	Availability Offered Ask for help Utilisation	high - low often - never often - never often -never
How important is support to the manager?	Importance/value	high - low
What type of support is perceived as most helpful?	Practical Informational Emotional Appraisal	helpful - unhelpful " " "
Support is available from whom? Support network used?	Network Home support network: partner, friends, family Work support network: colleagues, peer group Line manager Occupational Health Chaplaincy, Human Resources Organisation - family friendly policies	formal - informal used - not used " " " " " " "
What are perceived to be the qualities of a supportive line manager?	Availability Approachability Helpfulness Understanding Personal skills	high - low " " " "
What might stop the managers asking for support?	Confidentiality Trust Self-efficacy Falls on deaf ears Faith in line manager Judgement of others: success/failure Judgement of self No time for you Support person under pressure Future job prospects Expectations of self/others	high - low high - low high - low often - never high -low positive - negative positive - negative frequently - never frequently - never positive - negative high -low
When does the manager need workplace support?	Work overload Acute pressures, crises Personal/professional development New & unfamiliar duties or tasks Dealing with conflict	often - never " " " "
How does the manager experience support at a feeling level ? Consequences	Feel well supported/unsupported Feel included/isolated Feel important/unimportant Valued/not valued Confidence Reassurance	positive -negative " " " high- low "

10.8 A 'Flip-flop' Iterative Approach

Open coding is provisional in character. The intention is to generate initial formulations that may be modified as the research progresses. The active flip-flop between the data and the researcher's developing conceptualisations requires a dynamic process of changing and adjustment of the terms used until the fit can be improved. Coded concepts are refined, extended and related to each other as additional material is explored. Activities such as memo writing, refining the index system by category development, and a category integration system, such as axial coding (Strauss & Corbin, 1990) are used to take the analytical process forward.

10.9 STEP 5: 'Axial Coding'

'Axial coding' is the term used for the next analytical step. It involves a *'set of procedures whereby data are put back in new ways after open coding by making connections between categories'* (Strauss & Corbin, 1990:96). The purpose of axial coding is to give coherence, density and precision to the analysis through the identification of the main categories and the verification of the relationships between categories and their subcategories.

Axial coding utilises a 'coding paradigm' that specifies a category or phenomenon in terms of the 'conditions' that give rise to it, the 'context' or location of the event, the 'action/interactional strategies' by which it is handled, and the possible 'consequences' of those strategies. This procedure involves both inductive and deductive thinking and, as in open coding, making comparisons and asking generative questions about phenomena. The main question asked to link categories together is: What are the conditions (causal, contextual and intervening) bearing upon this phenomenon? According to Charmaz (1990), the conditions refer to the antecedents which influence and shape views, interactions and events, rather than determine them. They are identified by asking questions such as: What is this data referring to? What are the strategic or routine actions taking place here? What are the likely consequences?

This 'paradigm model' (Strauss & Corbin, 1990) is used loosely within this study to explore the relationships and possible causal connections between categories. Figure 4. below illustrates the use of the model to systematically link subcategories to the category 'long hours culture.' The nature of the questions being asked denotes a type of causal relationship between the categories, for example in Fig.4, Is the category **'work/homelife imbalance'** related to the category **'working over contracted hours'** as a consequence of **'strategies taken to cope'** with the **'pressures'** of **'enormous workload'?**

Fig.4: Illustration Of Axial Coding

phenomenon

'long hours culture'

context: specific properties & dimensions of 'long hours culture'

leave work late, come in early
work weekends
take work home
work through lunch
study at home
put in 'face' time

↓

Causal Conditions Antecedents	**Intervening Conditions** (Mediating Factors)	**Coping Strategies**	**Consequences**
Political pressures: meet targets Large volume of work Time pressures Cultural ethos: work,work,work! Career pressures Line manager's Style Interruptions	Managerial contract Psychological contract Social exchange balance Self-efficacy Personal/dispositional variables: values/beliefs/assumptions/ personal philosophy Commitment, duty, obligation Expectations of self: professional identity (stereotype manager beliefs) Appraisal of degree of threat in light of available resources & coping abilities Support availability Awareness	Behavioural strategies Practical problem-solving Organisational skills Time management Information-focused coping Communication skills Emotion-focused coping Use of support: work/ home Maintain physical health Decision-making Assertiveness	Strain Poor physical & mental health Fatigue Emotions: low frustration tolerance Mood Family/ Relationships Work/homelife balance affected Law of diminishing returns in terms of effectiveness

10.10 Building A Logical Chain Of Evidence

In axial coding the researcher analyses the categories in terms of their salient properties, dimensions and associated paradigmic relationships, giving the categories richness and density, integration and structure. The aim is to conceptualise the data into a framework or logical chain of evidence which describes and explains the relationships between categories (Miles & Huberman, 1994). The researcher asks: Does this really happen, and what would I logically predict as a consequence - and does that consequence appear in the data? The process is simplified by formulating a series of 'If - then' hypotheses and answers, for example, *If that were true, I should find 'x'. I do find 'x', therefore……* An example of this process is shown below (Parag. 10.13) demonstrating the possible link between the acute pressures of 'new and unfamiliar duties' and the variation in coping strategies and stressful consequences for the managers.

Fig.5
Properties & Dimensions for Category 'Managerial Duties'

Category	**Property**	**Dimensional Range (applied to each incident)**
Managerial Duties	Familiarity	(everyday familiar - new unfamiliar)
	Predictability	(expected - dropped in my lap)
	Size of task	(manageable - vast)
	Immediacy	(required later - urgent now!)
	Competing demands	(low priority - high priority)
	Implications for the Trust (publicity, financial, legal)	(positive - negative)
	Location of demand	(self-imposed - other-imposed)

Fig. 5.1
Exploring possible causal connections
between acute pressures of new and unfamiliar duties, coping and the stress response

Causal Conditions	Intervening Conditions	Coping Strategies	Consequences
management duties context: new & unfamiliar duties, urgent, legally & media sensitive	Availability of time & resources Personal resources: self-confidence - assertiveness, self-efficacy, level of control, skills, knowledge, social skills, adaptability, flexibility, competency. Organisational resources: support - line manager, network, team, experienced peer group, experts, mentor. Information Training Reassurance - appraisal Self/other-imposed expectations Expectations of others: they expect me to know/to be able to do this (as a manager) Expectations of self: I should know how to do this as a manager. Cognitive appraisal of situation relative to available/perceived resources	Logical thinking Practical problem solving Emotion focused coping Use of support networks: Information, practical help Don't reinvent the wheel Assertiveness What can I drop? Hit the ground running Balance competing requirements Prioritise Negotiate for time Burn candle at both ends Take work home	Task completion Strain Job satisfaction Emotional consequences: calm, distress, panic, anxiety, cry Headless chicken syndrome New learning Gain experience Feel sense of control Feel inadequate/ failure Add to CV-experience Gain in confidence Loose confidence

10.10.1 The following **'If….. Then…..'** explanatory hypotheses for managers coping with **'new & unfamiliar duties'** may sound clumsy but incorporate key elements and categories from Figs.5 and 5.1 derived in the analysis of this phenomenon.

(a) Conditions: Supportive Line Manager/High pressure - Low strain outcome

If…… under conditions of intense and acute pressure caused by or associated with new and unfamiliar duties (which are urgent and have significant legal or media implications for the organisation), the manager has a supportive line manager, can negotiate for time, knows where to obtain information, advice and practical help, knows where to set limits of responsibility, and can drop some other piece of work to accommodate the new task, **then…..** the pressure will be short-lived, the task will be dealt with effectively and the manager will return to a state of equilibrium, stay in control, feel calm and have a sense of learning and job satisfaction.

(b) Conditions: No support/High pressure - High strain outcome

If…… the manager, under intense and acute pressure, is given a new task with no explanation, has tight deadlines, cannot drop other work, has no one to ask for help, lacks confidence but expects him/herself to be able to do it anyway, **then…..** he or she will experience the situation as a crisis, feel rising anxiety, a sense of panic, emotional distress and sleepless nights. Initially the manager may resort to tears then, after the release of tension, he or she will explore some way to accomplish the task, which may include taking work home and the use of logic to ascertain what to do, where to go, who to see for information?

This analysis reveals evidence of key factors that appear to help to relieve acute job-pressure

and aid coping which include: setting limits, self-efficacy, time available, allowed to put aside another task, availability of support, importance of line manager, and actively asking for help.

10.11 STEP 6: Selective Coding - Integrating Categories At A Higher More Abstract Level Of Analysis

The progression so far has been a 'ladder of abstraction' (Carney, 1990). The researcher has moved from describing to explaining the data through a series of analytic steps that aim to transform that data through condensing, clustering, sorting and linking concepts and categories into a coherent set of relationships. The next step is locating and formalising key categories to build a theory that demonstrates how the variables are connected and how they influence each other. This process of systematically integrating higher-order or central categories into a theory or model which has conceptual and theoretical coherence is described as **selective coding** by Strauss & Corbin (1990).

Selective coding is a similar process to axial coding but at a higher, more abstract level of analysis. It is used to identify key categories that have links with many other categories. The network of linked categories forms a hierarchical structure in which central categories subsume lower-order categories. Effort is directed towards determining the most central, or **'core category**' - the central phenomenon around which all the other categories are integrated. This is the category that is most densely related to other categories and their properties. It is typically abstract enough to encompass all that has been described in the story and the last category to 'saturate,' that is, the analysis of additional data reveals no new categories, properties, or relationships (Rennie et al, 1988).

10.12 Explicating The Storyline - Overview Of The Central Phenomenon Under Study

Strauss and Corbin (1990) recommend formulating a storyline, a descriptive narrative about the central phenomenon under study, to capture the dynamic relationships between the central categories, achieve conceptual integration, and form a **'grounded theory.'** To identify the essence of the narrative, the researcher asks the question:

What is **most striking*** about this area of study?

What arises most strikingly* from this analysis is that some of the managers report being psychologically fit and healthy despite being under considerable pressures in the workplace. How, do they manage this? What stress resistance resources do they possess and utilise?

Thus, the storyline aims to describe and account for the managers' differential health outcomes through identifying and linking together in a systematic way the conceptual categories that are central to the job stressor-strain-health relationship. This is detailed in the next chapter.

Chapter 11: Phase II: Qualitative Study Findings

11.1 The Storyline

After a careful and prolonged analysis of the data, writing and rewriting, a statement of integration of the main categories and themes emerges. This final theory is supported by and restricted to those categories, their properties, dimensions and statements of relationships that exist in the actual data collected (evidence). The narrative is placed within the following context:

- **Context: High Pressure, 'Psychotoxic' Work Environment**
- **Sample: 'High Pressure/High Strain' & 'High Pressure/Low Strain' Category Managers**

All the managers in the qualitative study sample (n=12) have described numerous, frequent, general occupational and specific NHS pressures, which they experience in the workplace. They have also been exposed to the pressures of an enforced change through a management restructuring. These managers were purposefully selected from the phase I survey sample on the basis of their scores on the General Health Questionnaire and Job Pressure Scales. Those with low scores on the GHQ are referred to as 'low stress' category managers, indicating that they are psychologically healthy and managing effectively the risks associated with job-stress. Those managers with high scores on the GHQ (above the threshold for 'psychological caseness') are referred to as 'high stress' category managers, indicating that they are suffering significant symptoms of psychological ill-health, are having some difficulty functioning in the workplace and may have been off sick recently.

A grounded theory of differential health outcomes experienced by this sample of NHS managers under workplace pressure is laid out in detail in the following narrative. The managers use many metaphors to describe their experiences and these are integrated into the narrative, including the alternative titles.

11.2 The Narrative

Job Stress in NHS Managers: **'The Pit & The Pendulum'**
'Boundless Optimism?'
'Let's Bite The Bullet, One Last Push.....!'

The main storyline is about how a sample of NHS managers working in a large acute general hospital manage the risks associated with exposure to occupational stress and stay healthy. Sources of stress (stressors) that impact on the managers (as strains) occur at different levels: national, political, media, community, organisational, NHS institutional culture, work/home

interface, group, interactions, and individual. These stressors appear to arise from troublesome internal demands and expectations, or the perceived expectations of others and the organisation. They pressures may be imposed, chosen in or out of awareness, for example, through boundless optimism, or both.

Job-related stressors which exert strain on the managers, in addition to day-to-day operational demands, are both **chronic pressures** of completing 'enormous workloads in short time-frames, juggling priorities, meeting targets and deadlines, poorly motivated co-workers;' and **acute pressures** of 'coping with crises (fire-fighting), new and unfamiliar duties, frequent interruptions, no accommodation and equipment problems, and interpersonal conflict.' Being a target of other people's anger or hostility in the workplace is almost an accepted occurrence which causes distress but which some have learned to deal with, whilst others (mainly women managers) take it personally. The collective view seems to be one of 'managers as whipping boys,' a vessel for the venting and displacement of a variety of staff problems and workplace frustrations, such as logistical problems with patients and deadline pressures.

The managers also experience **environmental pressures** which they report as being peculiar to an NHS institution: '**a political battleground,** at the whim of politicians, meeting government targets, demands exceeding capacity to deliver, the tension between the delivery of government targets and high quality care, lack of directed strategic planning, short-term fixes, under-resourcing, skeleton staffing, clashes with consultants,' and the difficulties of ethical decision-making – 'How do you put a price on someone's care?'

Moderating factors, which serve to exacerbate the stressor-strain relationship on the managers and lower their morale, are the perceived lack of value and respect for their professional group evident in negative **media** coverage and the perceived public perception of NHS managers as 'second-class managers who can't get a job in industry.' Some of the managers' distorted or unclear perceptions of their occupational roles and **professional identity**, add to the pressure by causing the managers to have **unrealistic expectations** of themselves and what others expect of them in the workplace, for example, 'As a manager you should know everything, you shouldn't need help', 'As a manager you're supposed to be the person who is mature and carries everybody else.'

Recently the managers have been 'weathering the storm' of an **organisational restructuring** programme. The pressures of **enforced change** and **adapting** from the 'old regime' to the new add to their existing job-related strain. The restructuring was a negative experience for the managers, not only because the change was **outside their control** and a 'chess game of empire protection', but also because there were 'numerous hurdles to jump' in order to hold onto their managerial posts, for

example, 'having to apply for your own job,' 'needing a degree-level qualification.' The overriding perception of the management of the restructuring process is that of 'general chaos' particularly with regard to the real or perceived: 'secrecy, selective information, jockeying for position, back-stabbing, 'Balkanised' groups, unmet promises, lack of adherence to the published process, changes of plan, lack of accommodation, responsibility without authority, redundant posts, secondments, and career paths withdrawn.' Under these conditions some managers experience a variety of negative **emotional reactions:** loss of control, uncertainty, instability, powerlessness, alienation, worthlessness and anger. The descriptions of this experience include: 'a severe smack in the face!' 'very, very stressful!' 'fighting a battle,' 'I hated work, hated, hated coming to work!', 'left to survive on my own,' 'kept in the dark,' 'ethnic cleansing for some' and 'part of my punishment.' Some male managers feel particularly aggrieved, bitter or angry that promises have been unmet relating to their career progression and salaries - the organisation perceived as failing to fulfil its side of the **psychological contract.**

The pressures were exacerbated for some by the necessity to adapt to the styles and demands of frequently changing line managers, loss of support or isolation. Those who were less involved in the restructuring process, that is, did not have to apply for new jobs or be seconded, view the process as a period of **adaptation** and need for **flexibility**. Their views of the outcome are generally positive.

As a result of this battery of organisational conditions or pressures, some of the managers experience significant negative behavioural, cognitive, physical and emotional **consequences of job related-stress**. Work becomes all-consuming. Disrupted sleep patterns are a particular problem; some managers constantly think about work, wake up worrying about work, even dream about work, resulting in a state of fatigue or exhaustion. Low frustration tolerance causes managers to be 'crabby, irritable, disrespectful and even hostile to colleagues, and this feeds back in a vicious cycle to increase their discomfort, lack of trust, demotivation, and disaffection with the organisation.' Thus, some of the strain impacts on the managers' **relationships** and **homelife**. Some are 'struggling to keep it altogether,' they feel miserable, have difficulty getting out of bed, find it increasingly difficult to function at work and may be off sick. Nevertheless, some of the managers experience positive stress – 'the adrenaline rush of excitement' - and 'thrive on troubleshooting and challenge,' whilst others manage to cope with the demands and constraints and stay healthy.

In order to cope with the pressures of heavy workloads, loss of focus through interruptions, and meet their targets and deadlines, all of the managers are working long hours (45-60 hours/week). They may take work home, work weekends, come in early, leave late, and work their breaks. In addition, some are studying for management qualifications to advance their careers, with no protected time. This practice of 'burning the candle at both ends and in the middle' appears to be

perpetuated by the **'long hours culture'** of the organisation and the **explicit expectations** of the senior manager's contract - that 'you work as many hours as it takes to get the job done – makes you feel as though that's exactly what you have to do!'

Underlying some managers acceptance of the **'enormous workload'** and long hours culture is the **vocational** aspect of working for the NHS, doing a satisfying job, a job that's meaningful, of direct benefit to patient care. **Values** and principles of commitment, duty, loyalty, obligation, fairness, honesty, openness, responsibility are offered by the managers - 'we don't want to fail as individuals and we don't want the trust to fail' - in their **psychological contract** with the organisation and, in return, they expect a reciprocal trusting relationship and reward from the Trust.

Research Question: *Despite experiencing these intense and frequent stressors, whether perceived or real, some of the managers remain psychologically fit and express confidence in their competence to perform. How do they manage the risks associated with these pressures and cope so well? What are the differences at the individual level that enable these managers to stay healthy?*

The managers use a variety of **ways of coping** to reduce, avoid, eliminate or adapt to the strain of job-related demands and constraints. **Problem-focused coping** strategies are used to plan, organise, manage and complete their workloads within restricted timeframes. They may juggle priorities and demands effectively and take appropriate action to achieve their goals. In situations where they have less control over the desired outcome, particularly during conflict and crisis situations, some of the managers use **emotion-focused coping** - 'I just need to get this off my chest!' - to relieve, offload or avoid the tensions, frustrations and distress resulting from job-related strain. Managers differ in their preferred method of coping; some operate at the analytical end of the coping spectrum as opposed to the emotional, others prefer a **pragmatic approach**, detachment, distraction, reflection, dismissal or avoidance. All are concerned about the perceived negative reactions to expressing emotion in the workplace, particularly tears and distress.

Several **moderating factors** appear to influence the resilience of managers to organisational stressors and bring about differential health outcomes. Certain **dispositional variables, attitudes, beliefs, and values** moderate the managers' appraisal of situations as threatening, their assessment of the availability of resources, their choice of coping strategies, and the resulting impact of job stressors on their health. Their attitudes and boundary-protecting philosophies, for example, 'you can't take on all the woes of the world,' 'your own health and family come before work,' help maintain a realistic approach to their work, defining limits and parameters of acceptability and risk beyond which people and/or job are not allowed to step and negatively affect their well-being. In this way they achieve a **balance** in their work and homelife and in the **social exchange** – 'giving as

much as they get from the organisation, steering clear of the slippery slope to fatigue and exhaustion.' A style of **assertive behaving** helps them to protect their boundaries, deal with conflict situations, and ask respectfully and realistically for what they want in terms of help and resources.

Awareness plays an important role in the development of **boundary-protecting philosophies** and transforming these into action. The healthy managers are clear, **realistic** and pragmatic about what they can and cannot do, and what they expect and accept in the social exchange of work. They communicate this and do not make promises they cannot keep. They are aware of the limits of their bodies with regard to physical strain and energy levels. They pay attention to stress-warning symptoms, take regular leave, exercise, relaxation, rest and recuperation, in order to restore a healthy physical and emotional balance, maintain fitness and a sense of well-being. On completion of their day's work, they may consciously 'switch off,' that is, cognitively and emotionally detach themselves from work, enjoy activities or pastimes which distance them from potentially stressful situations, take their mind off work through applying selective attention to enjoyable activities such as golf, or escape to their 'stability zones'[9] through walking, horse riding, sailing, the gym, or reading.

A robust personality style of **stress resistance** is evident in some of the managers - namely **'hardiness.'** The hardy managers demonstrate the resourceful qualities of **commitment, control and challenge,** which have a direct effect on their appraisal of situations in the workplace as harmful or otherwise, and their assessment of available coping resources, thereby influencing health outcomes. Aligned to the construct of control is the managers' sense of **self-efficacy,** whereby those who have previously coped with very tough life events or circumstances believe that their old, well-tried strategies will work in other problematic situations. These beliefs about the self and one's activities appear to function as effective buffers against the adverse effects of stressful job conditions, particularly role stressors. These self-helping beliefs are a major cognitive component in the definition of the self, for example, 'I'm a survivor, I know I can cope' and the managers' (predictions) appraisals of potentially stressful events as non-threatening and therefore not stressful. Some of the manager's beliefs about the self or their sense of identity, such as, 'I'm a sticker - a hanger-in,' 'I'm a loner, quite self-sufficient,' 'You go until you drop' appear to be unhelpful under prolonged pressure because these managers are not setting limits or applying clearly defined protective boundaries or parameters of self-care.

The dispositions and qualities of **optimism, enthusiasm and motivation** are also evident in some individuals' self-images and descriptions of coping behaviours. Unfortunately the **boundless optimism** of some managers (who do not set limits or know when to call it a day), whilst admirable

[9] Palmer, S. (1989) The use of stability zones, rituals and routines for reducing or preventing stress. Stress News,1(3),3-5.

and desirable from the organisational point of view, encourages them to carry on or cope with difficult situations where they report having little control or personal and professional resources, for longer than may be healthy. The reported **organisational culture** of 'jam tomorrow,' 'let's bite the bullet, one last push...!' exacerbates this modus operandi.

The healthiest manager is one who calls himself/herself a **'people-person.'** He or she values, respects and supports their staff and colleagues, has excellent **communication** skills, shares information, is sensitive to other people's moods and concerns, encourages feedback from subordinates about their management style and ways of working, develops, trains and supports new employees, has an open-door policy, offers a sounding board to others, is **team-orientated**, and believes that people are the organisation's biggest resource and best asset. The values of a people-person manager are illustrated by: 'You're either a people-person or a target-focused person. I've obviously got objectives that are agreed between me and my line manager, which we have to meet by the end of the financial year, but not at the expense of losing all my staff. It's never that black or white, there's often something I can still do to meet the objectives but **not at the expense of the person!**'

The managers who cope best and suffer least from the adverse effects of stressful job conditions are those who **ask for support** in the workplace when they need it, regard support as important, even crucial, and have access to a **key support figure** - their **line manager** - whom they respect and trust and who has a realistic approach to what can and cannot be achieved. Even those managers who consider themselves to be self-sufficient or self-contained, value a line manager who keeps confidentiality and who offers support in difficult times.

Those managers who are suffering significant symptoms of job-related stress either have a **difficult relationship** with their line manager (described as 'not interested, not listening, not genuine, not understanding of your role, unempathic and unapproachable'), or **do not ask** for support because of their **unrealistic expectations** of themselves as managers, their boundless optimism, and the Trust's implicit promise that things will get better anyway. They consider that by asking for support they may be judged negatively as 'unable to cope under pressure, weak, unreliable, incompetent and written off in the job market.' Some fear they would be labelled as having 'mental health problems.' Statements such as - **'**leaky sieve,**'** **'**wouldn't trust a soul,' 'mixed messages and hidden agendas' reflect a negative perception of the **culture of the organisation** and inhibit many managers from asking for support. For some, there is a perceived threat that 'if you show the slightest chink in you armour, someone will get the knife in!' 'It's so **competitive** and so wanting to make an impression that people don't think about the consequences of their actions on others.'

Thus a line manager relationship and organisational culture defined by **trust** and **confidentiality** is critical for determining whether or not the managers will ask for support. Few managers report experiencing a formal performance **appraisal** that gives two-way feedback and sets personal and professional development targets. In other organisations, some have experienced and valued supportive **mentor relationships** as an aid to coping.

There are **gender differences** in the perceived value and importance of workplace support and the development, selection and utilisation of **formal** and **informal support** networks: line manager, friends, colleagues, mutually-supportive teams, and **organisational support services** including: the Chaplaincy, Occupational Health, and Human Resources. The latter have a poor reputation for confidentiality. The managers' view of the Occupational Health and Staff Counselling Services is respectively 'That's where you go for workplace assessments, isn't it?' or 'You would have to be really desperate to use it yourself - that's where you send your staff!' 'I would not say that this Trust has a particularly well-defined framework for managerial support' summarises the general consensus.

Male managers tend to seek support predominantly from their **wives or partners** and rate workplace support as less important than the female managers. At work, the men's main support is through their line manager or a mutually supportive team. The men use language of 'accountability and responsibility' around the construct of support and value a line manager who 'makes decisions and does not prevaricate, someone to kick issues around with.' Of the types of support, **practical support** is considered most helpful by the men, followed by informational support, particularly advice on political and wider NHS organisational systems and issues. Some men are dismissive of 'softer' or 'touchy-feely' issues but the 'people-person' males are willing to provide a safe space for their subordinates 'to pour their hearts out.'

The women managers have a **supportive network** or core group of friends and colleagues – 'a spiders web of people they can trust.' Around the construct of support, they use language of 'listening, self-esteem, reassurance, confidence building, discuss your emotional side, feeling valued, empathy and sympathy.' The women managers regard as helpful – practical and informational support, guidance, appraisal and (differing from the men) emotional support - if they feel they need it and can trust the support person. Women managers currently suffering most from job strain regard emotional support as most helpful.

Finally, the managers report evidence of a move to a more **open, respectful honest and transparent** organisational culture with a new leader who appreciates that employees have families

and lives outside work. There is evidence of a more realistic approach to the setting and management of targets and objectives. An increase in female managers is highlighted positively by the women: 'the world is your oyster' but negatively by some of the men who feel excluded from the social support of the women's networks.

In terms of future **solutions** 'It's actually putting in a meaningful support structure is the problem! Because the first thing you've go to do is actually build up the **trust** – I really don't think there's an awful lot of trust!' It needs to start with managers valuing each other- and that we don't treat each other badly. For any support culture to exist, it's got to be open and honest. If it's not open it can't be trusted. If it can't be trusted the people in it can't be trusted! And if trust doesn't exist then the free exchange of ideas doesn't happen!' 'I think a good mentorship programme and good supervision within the working environment is probably the key issue.'

11.3 Core Categories

Fig. 6. Core Conceptual Category

The 'Fit' Manager[9]

Exposure to the job pressures or stress risk-factors associated with working as a manager in the NHS (a potentially psychotoxic environment) may lead to negative health outcomes. In order to cope with the perceived or real job-related pressures effectively and manage, adapt to, or minimise the risks to health and stay 'fit' (physically, psychologically and functionally), the manager engages in the practice of 'protective self-governance,' 'corporate mindfulness,' and 'reciprocal relationships,' that is, a style of operating and relating in the workplace with awareness, realistic expectations, and protective boundaries. This involves raising one's awareness of potential workplace psycho-social hazards, knowing/setting limits of tolerance of personal and organisational demands and expectations, practicing vigilance, self-monitoring, and the proficient accessing and utilisation of (internal & external) resources and support. Key factors in staying fit and stress-resilient are: ***a robust, people-orientated personality style, asking for help*** *when required, and the availability and use of a* ***trustworthy, supportive line manager.***

11.4 The above narrative offers a grounded theory of how and why some managers stay psychology fit under intense and prolonged job pressures. Central to theory is the selection of a core

[9] In this context and throughout the rest of the study the term 'fit' manager refers to 'fit' NHS or healthcare managers.

category around which all the other categories can be integrated. The constructs 'fit manager' and 'unfit manager' stand out as 'core categories,' which are sufficiently abstract to encompass all the other categories in the job stressor-strain relationship and account for the **differential health outcomes** of the managers in the sample. The actual relating of categories to each other, however, is more complex than a simple cause-effect because of the presence of intervening sets of conditions that enter at various points. It is these intervening conditions that explain why a particular manager has a certain outcome or chooses a certain set of strategies whilst another manager does not. These intervening conditions or moderators are outlined below and can all be validated with data derived from this study.

11.5 Key Category: 'Stress Resistance Resources' Of The 'Fit' Manager

A '**people-person**'[10] who is a mindful, pragmatic optimist and -

- has positive, well-bounded, **reciprocal relationships** with subordinates, peers, line-manager, and organisation.
- has a **robust and resilient personality** (hardiness) and **professional self-efficacy.**
- operates in a state of **corporate mindfulness.**
- practices **self-awareness** and self-monitoring.
- defines, delimits and protects their **boundaries** of tolerance (physically, socially, mentally).
- has a sense of **control** of workload through skilled management practices.
- is **realistic** about what they can and cannot achieve.
- has realistic **expectations** of the organisation (**psychological contract)** and their role as a manager (**professional identity).**
- proficiently accesses and utilises (internal and external) resources and **support.**
- maintains **flexible** attitudes and can adapt to change.
- delivers their **targets.**
- has motivation, enthusiasm, commitment, job-satisfaction, and a sense of **meaning** through work.
- looks after their **body** – exercise, diet, relaxation.
- **balances** work and homelife.

Importantly, these psychologically robust and healthy managers also:

- know when they need help and will **ask for** support.

[10] 'People-person' characteristics as defined by the managers are detailed in the above storyline

- have a confidential, trusting, listening, understanding, and mutually rewarding (reciprocal), working relationship with their **line manager**

11.6 Key Category: Awareness

The construct of 'awareness' appears to be a particularly important 'stress resistance resource' for the managers protecting them against potential job stress hazards. The researcher's interpretations of the meanings of awareness in this context are: conscious of, having knowledge of, well-informed about, knowing, being mindful of, taking thought or care of, for example, expectations, limits, potential threats. The 'fit managers' are highly aware of the following factors (recorded in N4 memos by the researcher):

Subcategories:

- **Hazards:** Raising your awareness of potential hazards i.e. identifying those internal and external job-related situations, which you appraise as potentially harmful, or a threat to your well-being. Assessing threat potential against available coping resources.
- **Professional Identity:** How do you define yourself within your own professional group? What does it mean to be a manager in the NHS? What do you expect of yourself and others of you as a manager?
- **Psychological Contract** with the organisation: Your unwritten expectations of the organisation in return for your input. What do you expect to get from the organisation in return for your loyalty, long hours and commitment?
- **Body/Mind Frustration Tolerance Limits:** awareness of your boundaries or limits of tolerance in order to safeguard your psychological, emotional and physical health.
- **Vigilance/self-monitoring:** scanning the environment for potential stress hazards and your body for warning signs or symptoms of stress.
- **Balance:** work/homelife, social exchange, mind/body awareness.
- **Coping:** proficient accessing & utilisation of internal and external resources and support (if available) in order to effectively manage job stress.

11.7 Core Category: The 'Unfit' Manager Context: 'The Pit & The Pendulum' or 'Boundless optimism'

Managers suffering most from organisational pressures and demonstrating significant symptoms of stress are those who:

- are not very self-aware or deny their stress-related symptoms.
- do not have a supportive relationship with their line manager.
- do not ask for help within the workplace.

- have accountability without authority (low control).
- interpret the managerial contract with the organisation literally, i.e. 'work as many hours as it takes to complete the task.'
- perceive their psychological contract with the organisation to be violated - promises unmet, career paths withdrawn (expectations unmet) (effort/reward imbalance), loss of trust.
- too much compatibility of values and goals of commitment and vocation (**over**-committed).
- give more then they get in the social exchange of work (**over**-work).
- use emotion-focused coping as a main strategy.
- do not pay attention to their physical and mental health.
- do not set boundaries, limits or parameters on their expectations of self and their role as a manager e.g. you go until you drop, burn the candle at both ends and in the middle.
- have 'boundless' optimism which drives them on with the hope of jam tomorrow and rewards for their labours but which may not come to fruition (**over**-optimistic).
- do not set boundaries on their hours of working (**over**-tired).
- do not set boundaries or deny what their bodies and minds can cope with.
- do not engage in/make time for physical exercise or stress-relieving pastimes/rituals, although they know they are helpful.
- do not set boundaries or balance the work/home interface (**over**-involved with work).
- have a distorted view of a manager's professional identity and hold stereotypical or unrealistic expectations of managers (as a manager I <u>should</u> do or be able to do…..).

In sum, unfit managers generally appear to lack a sense of balance, particularly between work and homelife. They may be over-involved, over-committed, over-worked, and under-aware of workplace hazards and the psycho-physiological consequences of workplace strain. They may be confident and have self-efficacy, but do not set boundaries on acceptable workloads and hours of work. Fit managers tend to utilise people-skills, stress resistance resources, a robust personality, awareness, and their line manager. The organisation? – The NHS Trust culture paradoxically is low on 'trust', which is paramount to healthy management (Simons, 2002).

Chapter 12: Phase II - Conceptual Themes

12.1 Introduction

The textual data so far has been subjected to increasing levels of conceptualisation in order to identify key themes in a grounded theory. This section aims to (i) support and verify conclusions drawn from the text and the Phase I survey, (ii) explore differences in gender and 'high' and 'low stress' category managers (N=12) across each key theme, (iii) answer research questions, and (iv) relate the findings to the literature. Quotations and data displays[11] provide supporting evidence and enhance conceptual coherence (Miles & Huberman, 1994).

Key themes include:

- General pressures
- NHS pressures
- Interpersonal conflict
- New & unfamiliar duties
- Consequences of stress
- Emotional consequences
- Coping
- Support

12.2 Theme: General Pressures

Question: Do the general managerial pressures identified in the qualitative analysis match those found in the Job Stress Survey?

The salient properties of the general managerial and NHS pressure domains are illustrated in data displays and quotations (see Appendix N-P). These corroborate and add to the Phase I survey findings, confirming that this sample of managers are experiencing numerous, frequent and intense job stressors. *'Feeling under considerable pressure!'* is reported by all of the managers regardless of whether they demonstrate significant levels of psychological distress on the GHQ-12, implying that possibly some cope more effectively than others.

High Stress Male

> *'It's the sheer enormity of the workload, I guess. Yes, very much so. Since I came here there has always been something that is urgent and important. Exemplified by - when explaining things to my wife - 'Just got to get through this, the light is at the end of the tunnel! Once I get through this, things will ease off a bit.' But by the end of the tunnel, something else has appeared! And if I fail to deal with it or if any of my team fail and I don't pick it up, it's my head on the block!'*

[11] Due to the limitations of space in this study most data displays, quotations and supporting evidence are placed in the Appendix (Volume II).

Question: Are there any differences in the general pressures experienced by 'high' and 'low stress,' or male and female managers?

12.2.1 Job Stressor Counts (using N4 computer software)

(a) For high stress/low stress managers

From the text, the number of job stressor items (83) counted for high stress category managers is greater than for low stress managers (51 items), suggesting a possible association between number of stressors and level of strain.

(b) For gender

Job stressors counted for both high stress male and female managers are similar at 43 and 40 respectively. Low stress females report fewer sources of stress (21) than low stress males (30 items). In total, male managers report **more** workplace sources of stress (70 items) than female managers (64). However, the Phase I Job Stress Survey (JSS) results suggest that any gender differences in the perceived intensity of job stressors for this sample are not significant. Higher levels of job strain reported by women may possibly be explained by their greater vulnerability to workplace stressors, less effective coping strategies, or the burden of domestic demands outside the workplace. Lack of peer support, fluctuating line-manager support, and pressures of supporting others are highlighted mainly by the women. Pressures of workplace isolation and lack of decision-making by superiors are largely experienced by men.

12.3 Theme: NHS Pressures (see Appendix P)

Question: Are there any workplace pressures specific to the NHS managerial environment?

Although the Job Stress Survey identifies general stressors, this questionnaire is not specifically designed for an NHS environment. The Phase II identification of NHS stressors in the managers' own words supports recommendations (HSE, 2002) to use job stressor questionnaires derived from the specific context of the research environment.

Category: Government Targets/Demands Exceeding Capacity to Deliver

Low Stress Male

> *'The pressures are really government-imposed targets and not recognising that we are under-resourced, even though it's clear that we are. Managers are still supposed to meet all the targets, all the demands, despite the acknowledged under-capacity. Even the CHI report acknowledged that we did three times the work with only twice the resources and yet we still have to manage government-imposed targets like waiting times or seeing patients within two weeks, or whatever! So I think that's the main pressure - unreasonable government targets that everyone slavishly follows from the Chief Executive downwards, and woe betide you if you can't meet them - you get hauled up or your career doesn't progress!'*

Category: Crisis Management
High Stress Female

> *'I think we firefight the whole time in this Trust, the whole time you fight one fire - you put it out and another one comes up behind you! We do do a lot of crisis management with big issues - we have no beds, we've got long waiters, we're trying to get the waiting list down, and the place is full, what do we do? - To personal issues of a secretary suddenly going off sick, the consultant's got no backing!'*

Both high and low stress managers report little variation in type of NHS workplace stressor. Self-imposed pressures in this context are illustrated by the constructs of 'commitment' and 'vocation,' supporting Lee & Ashforth's (1996) findings of a negative relationship between organisational commitment and emotional exhaustion.

Category: Commitment
High Stress Female

> *'I think most people who work in the NHS choose to work in the NHS because they do feel committed to providing a service. And in some ways that puts you under pressure because you are fundamentally committed to what you are doing, to make the whole thing work.'*

Category: Vocation
High Stress Male

> *'Underlying my acceptance of the workload and therefore the hours, is the vocational aspect of working for the Health Service. And for that I am prepared to work longer hours than might be usual or strictly good for you and accept a lower salary than I might expect in the private sector.'*

The main difference between male and female managers' perceptions of NHS stressors is the focus on 'softer, relationship issues' by the women e.g. difficulties motivating and rewarding staff; concern that subordinates work overtime for no extra pay. The women respond more emotionally, particularly with frustration at the *'political battleground'* and being perceived as *'second-class managers,'* and they feel less valued. Pressures of working in a predominantly female environment with perceived exclusion from women's social networks are highlighted by some of the men.

12.4 Theme: Workplace Conflict (see Appendix Q)

Question: What is the managers' experience of 'personal insults' in the workplace?

Findings suggest that social norms of tolerated aggression exist within this environment and that stress may be a cause and a result of hostility (Breakwell, 1986). In the Phase I survey, the women managers reported 'personal insults from colleagues, patients, and relatives' as a more intense stressor than the men. This significant difference was confirmed by the qualitative analysis and revealed that women more than men found conflict and bullying hard to deal with. Women experience a wide range of reactions to hostility from feeling really uncomfortable, distressed, tearful, or walked over, to reacting assertively, rationalising or matching the

aggressor's behaviour. Findings support the literature that women are more vulnerable to psychosocial factors as sources of stress than their male counterparts (Vermeulen & Mustard, 2000).

Category: Conflict/Cowering Fox

High Stress Female

> *'And I've had a consultant who was very angry that one of his patients was cancelled and he came into my office and I was like a cowering fox in the corner of the room! And once he'd gone, I became very emotionally upset because it was just the shock of it! And I won't answer back, I won't stand up for myself, I will let people walk on me rather than say 'No, excuse me, please don't do that!'*

Men, on the whole, *'take it less personally'* than the women and are more insulted or upset by implied (underhand) challenges to their personal values or integrity. However, some men have been *'almost reduced to tears'* under extreme provocation, view conflict as a *'sparring match,'* or enjoy *'troubleshooting.'* Their pride is rather hurt and men tend to feel upset, angry or indignant when their principles of honesty, objectivity and fairness are challenged. Findings confirm models of male gender role stress (Pollock, 1998) associated with anger and anxiety, consistent with high Type A health risk (Friedman & Rosenman, 1974).

Category: Conflict/Sparring Match

High Stress Male

> *'Personal insults, certainly not! Actually, personally I only get them from colleagues and I tend to see it as a sparring match and give as good as I get - unless implied insults I'd have problems with. The thing that has upset me most since I've been here is when my integrity or objectivity has been questioned, because the thing I'm proudest about since being here I the fact that people across the community respect what I say. So when that is questioned, I take that very personally. They probably don't mean it personally?'*

12.5 Theme: Management Restructuring

Question: How do the managers experience the restructuring process?

The pressures associated with the recent management restructuring are reported in Appendix R. Findings support the literature that the restructuring process is inherently chaotic, unpredictable and painful (Armstrong-Stassen, 1998; Burke & Greenglass, 2000). The reality or prospect of job-loss, loss of control, reduced support networks, and additional pressures to work long hours and achieve short-term results tests the managers' flexibility, adaptability and levels of frustration tolerance. Fury, powerlessness, and loss of trust are some of the negative reactions evoked. Restructuring also involves the stressful effects of breaches of the psychological contract with regard to managers' expectations of the organisation (Rousseau, 1995), an increasing imbalance of the social exchange process at work (Siegrist, 1998), and increased workload without increased compensation and reduced trust (Aryee et al, 2002). Findings

suggest that women managers may be exposed to additional stressors - losing their support and dealing with an organisational culture that becomes more masculine in terms of 'macho posturing' (Karambayya, 2002) and *'back-stabbing'*. Male managers report greater frustration and distress regarding the perceived lack of decision-making, directed strategic planning and breaches of the psychological contract.

Categories: Responsibility Without Authority/No Control
High Stress Female

> *'During the reorganisation, although technically I wasn't responsible for delivering targets, I felt as though I was. But I didn't manage the staff to make it happen so I had no control. I had the responsibility but without any authority - it felt like. And that I actually found very, very stressful - I was going home from work and I hated work, hated, hated coming to work!'*

Categories: Competition/Back Stabbing
High Stress Female

> *'It was actually a very difficult time because everybody was backstabbing! I was not competing with the people who had been my peers - I'd already changed jobs by that stage. But it was not pleasant -watching what was going on, and people I think jockeying for position. And if they could put that person down and make them look bad, it makes them look better! Criticising how other people do their jobs, it slightly deflects attention away from how you do your own job, doesn't it?'*

12.6 Theme: Management Style And Culture

Question: How do the management style and culture influence the pressures experienced by the managers?

Metaphors and quotations describing the 'old and new regime' before and after the restructuring are given in Appendix S. The different emphasis in language reflects male and female gender role stereotyping (Nelson & Burke, 2002). Men tend to use words indicative of power and control: *targets, fortress, 'balkanised,' ruthless, rule by fear*. The women's language suggests 'softer' or relationship-focused issues: *not a listening culture, blinkered, relationships, not supportive, resistant to change.*

Category: Jam Tomorrow/One Last Push/Boundless Optimism
High Stress Male

> *'So it's always, what's it called, jam tomorrow. So it was understanding, it was supportive, but there was just no proof, no actions for the words. And I think to an extent that is still the case really, there is still 'Let's bite the bullet, come on, let's get one last push, then we'll be home!'*

Category: Work, Work, Work
Low Stress Male

> *'I just had too much work and so one just did it and took it home and worked at weekends, and that was the ethos, that was how people worked, and the bosses worked like that. But again at that stage it was expected and because my line manager had been in the trust for years that was his ethos - work, work, work! But it knocked onto*

other things. And I started car sharing with somebody else, who came in at 8.30 am but finished at 5.20 pm. Which was fantastic, brilliant, yes, get home - but that was frowned upon!'

Category: No Trust

Low Stress Female

'Oh yes, I wouldn't trust anyone here at all. I wouldn't! And I was discussing this the other day with another senior manager over a cup of coffee and we both said 'Wouldn't trust a soul'. The best way to do it is to keep your mouth shut, low profile, and deliver the goods. The ultimate aim is to deliver. That is the survival technique here!'

12.7 Theme: Acute Pressures

Question: Are there any gender differences in the experience of 'new and unfamiliar duties'?

The Phase I survey item 'assignment of new and unfamiliar duties' was reported as significantly more stressful for men than women. However, in the qualitative analysis, this acute stressor is demanding for both genders under the specific conditions and dimensions of urgency, size of task, competing requirements, demand location, personal skills, information and support (see Appendix T). Women managers, however, may initially react with emotion - 'panic,' use their information and support networks, and then actively problem-solve. Men prefer to actively problem-solve, burn the candle at both ends, expect to be offered help, and ask for help only after some time. Women place greater emphasis on mobilising support (Greenglass, 2002). The male view is more pragmatic - *'it's the nature of the job,' 'get it under control,' 'try not to reinvent the wheel.'* Key factors in coping with new and unfamiliar duties are: managerial experience, time available, asking for help, and having a supportive, understanding line manager. Self-efficacy and realistic understanding of the managerial role is also important. Male managers may find acute pressures a more stressful experience because they conform to male gender stereotypes by delaying asking for help or advice (Burke, 2002).

Category: Self-Sufficient/Expectations Of Help

High Stress Male

'I like to be left to be as self-sufficient as possible. But when I say 'This is beyond my responsibility - this is where you need to get involved or this is where I need your advice!' - then they are there for me.'

Category: Headless Chicken

High Stress Female

'Panic! Panic because I knew it was such an important thing and that if I'd got it wrong it would come down on the Trust. And it was panic and the headless chicken came in for probably half an hour as to what do I do? Who do I see? Where do I go? And after that I'd think logically and I had to sit and think about what the needs were, what I needed to get, who I needed to see. I mean, I did it, it was all done - but first it was 'Oh, I can't do this!' I'm a very confident person, but my self-confidence in my own ability sometimes is lacking and I think I just can't cope with this, I just can't do it. Sometimes I think people are going to find out that I'm not as good as they think I am!'

12.8 Theme: Consequences Of Stress

Question: How do the consequences of job stress in the qualitative analysis match and elaborate those of the survey (GHQ-12)?

The consequences of workplace pressures reported by the interviewees, centre on physical, behavioural, cognitive, interpersonal and emotional categories (Appendix U). For high stress managers, the total count of negative reported symptoms of stress is 59. For low stress managers, the total count is 37 negative symptoms. Sleep disruption, with associated fatigue and/or exhaustion is most frequently reported, for example:

Category: Motivation/Exhaustion
Low Stress Female

> *'When I first was appointed, I think one of my strengths was the motivation and the enthusiasm and the passion that I actually had for my job. And I find that that over the period of time is now diminishing. I feel that motivation and drive and being able to empower other people is really crucial for a manager to be able to do but if you're not being supported yourself it's very, very hard to drive that emotion and drive that motivation.* ***And also it's hard to be motivated when you're physically exhausted, and I'm physically exhausted!'***

All of the managers report a negative impact of stress on their relationships and homelife. The most highly stressed managers describe: *difficulties in functioning, work constantly on my mind, interrupted sleep, feeling exhausted, anxious, miserable, worthless, short fuse and have been off sick recently.* The following quotation illustrates a high level of psychological distress caused by work:

Category: Utterly Miserable
High Stress Female

> *'Very unhappy, I hated coming to work and I was worried that - you know when you wake up and you think 'I really don't want to go to work, I could phone in sick.' But I don't think I'm sick. I was just so scared that if I phoned in sick one day, I'm not sure that it wouldn't become another day and another day ……!! And I didn't want to start on that slippery slope, so therefore you just keep coming in. But my family I think suffered, because I would come home every day and just sit there thinking 'Oh God, I hate my life, I hate going to work!' I was thinking 'I've got to get out of this job, I'll become a teacher or anything!' It was like feeling trapped and there was no way out of this - day after day of feeling so miserable!'*

Low stress category managers not only report fewer negative symptoms but also signs of positive stress including: motivation, job satisfaction, feeling valued and enthusiastic e.g. *'When I'm working terribly hard and thriving on it, I'm on a high!'*

12.8.1 Consequences Of Stress: Gender Differences

Women tend to report a greater number of physical consequences of stress whilst the men generally appear less aware of their stress-related symptoms or take little notice, for example:

High Stress Male

> *'My body just packed up, I didn't realise it until it happened. It was a terrific shock. I didn't realise at the time that what I was experiencing, the symptoms, was as a result of the pressure. It was rather like accepting one's fate.'*

Low Stress Male

> *'I'm burning the candle at both ends and in the middle and this can't go on too long. I almost feel as though I'm living life a bit too fast and while I'm in my mid-30s my body can cope with it. But it will be taking its effect, there's something ticking away that eventually I'm going to have to sit back and take notice of. But at the moment I don't feel any particular physical symptoms.'*

12.9 Theme: Stress-Emotions

The range and frequency of stress-related emotions drawn from the text through a computer aided search are shown in Appendix U. The total count of negative emotion words for high stress managers is greater, at 62, than for low stress managers, at 21. The total count of stress emotion words is slightly higher for women (45) than for men (37). The main stress emotions are low frustration tolerance and anger expressed across a continuum ranging from annoyance, crabby, irritable, to sheer unadulterated temper and fury. Low stress managers report frustration and annoyance rather than more overt, demanding types of anger and hostility. Men tend to express their frustrations overtly, either at work or home as follows (Levant & Pollack, 1995).

High Stress Male

> *'I suspected that there were things not quite right, and I became very angry and, you know, raised voices etc. - 'If they do that to me, I'll sort them out and they've picked on the wrong chap!' And my partner would calm me down and she would - not console me - but effectively offer me a different perspective, which I would then discuss and perhaps accept.'*

Low Stress Male

> *'I must admit, I get short tempered, crabby is probably much the same, invariably about silly little problems. People can still come to me and ask questions and I don't bite their heads off, but very often sometimes they will come to me with very silly little problems or petty problems. In they come and invariably interrupt my train of thought through a cross manner, and of course I'm afraid that's when it just slips and becomes rather short, never nasty or rude to them but rather short. Whereas normally I'm a very diplomatic kind of person.'*

Some men may go silent in confrontations, consciously maintaining professionalism, or feel close to tears. Others may 'give as much they get.' Female anger may be expressed as tears – *'It's like when you get angry at something and you want to show your anger and you end up crying, and you suddenly look like a real wimp!'* Some women report feeling angry with themselves. *'Women handle stress so differently. If I feel very stressed, I tend to cry and I get angry with myself for acting like such a woman! Men don't act like that!'* All the high stress managers report negative stress emotions categorised under threat, harm, strain or fear. They also report inability to cope, powerlessness, loss of control, culpability, disaffection and loss of

trust. Not feeling valued, *'absolutely worthless,'* is reported by both high and low stress managers, often associated with conditions which are *'the final straw!'*

Low Stress Female

> *'Well I actually came to the point, I actually felt as if I wanted to hit somebody! I had never felt so undervalued in my life, ever, not in my working life, at all! I just felt as though I couldn't understand what the game was because they appointed me to the job but didn't give me the tools to do the job. Plus I was being put under pressure because I wasn't delivering what I was supposed to deliver - but I didn't actually have the means to do that. I felt they were denying me my most basic right, which was a small space of my own, my own desk, my own chair, my own computer. I didn't even mind sharing, I just felt I had nothing at all, I was undervalued, worthless really - 'Oh, she can just be moved here, there and everywhere, she's not a very important person!''*

Feelings of failure, misery & loss of confidence are reported by high stress female managers.

> *'I don't think anybody at work would have known how unhappy I was, I really don't. Because apart from anything else, I felt I'd failed or something - a feeling that I had failed in some way. So I didn't talk to anybody at work about it and I was relieved when an opportunity came up to get myself out of it. I'd already made up my mind I would go for a job with lesser pay that I enjoyed - another job had come up which was a demotion and I thought I would rather do that than go back to the job I was doing! And it was like the cloud lifted the minute I started doing a different job. The misery was very much related to that job.'*

Feelings of guilt, regret and concern are described by both men and women with respect to having little time for partners or children.

Low Stress Male

> *'Some of the kids I feel sure wondered at some stage 'What does Daddy look like?' My wife thought 'Why did I marry you because I hardly ever see you?' And it culminates eventually in, not an argument, but in a point of them saying to you 'We need you to be home at a set date because.....' And you have to physically make yourself do it because there's an organisational expectation, not so much now, but certainly when my old boss was still around, it's work, work, work - by his own self-admission.'*

High Stress Female

> *'I'm probably more concerned about my children now than I have been because I'm concerned as a teenager, my elder son - time's running out, he won't be a child for much longer, and I'm wasting time. Before I know it he'll have left home, five years will fly by and he'll have left home and I'll look back and I'll say 'I didn't talk to him, the last five years I didn't talk to him!' And will it matter to him? Possibly not. Because I'm just so little part of his life, and that bothers me.'*

12.9.1 Expressing Emotional Distress

Most women report having cried at or about work with a close colleague, or at home with a partner. However, most managers believe it is unhelpful to express distress in the workplace for fear of being judged as not coping, incompetent or conforming to stereotype views of women as girlie or weak (Fielden & Cooper, 2002).

Low Stress Female

> *'I think that's harmful for you as a manager, because you're supposed to be the person that is mature, you're supposed to be the person that carries everybody else. And I've always felt myself quite a capable person to do that. So I see that being able to display how you are feeling yourself emotionally, perhaps some of the stress that you feel in your life in the management environment, that's not the place to express it, quite frankly. I think you have to take it somewhere else, because you can't be seen as somebody who can't cope!'*

Men, on the whole, are even less comfortable with emotional issues in the workplace.

Low Stress Male

> *'Emotions - I wouldn't say I'm uncomfortable with emotions. It's more I just feel they are often unnecessary and complicate things and muddy the waters. And in terms of focusing on myself, no I'm not at all emotional.'*

High Stress Male

> *'I think my instincts, I wanted to lash out, but my professionalism contained me. My second reaction was complete and utter disbelief. I was very near to tears, I remember and struggling to keep it all together.'*

12.10 Theme: Workplace Support

Question: How do the managers' experience support in this organisation?

The construct of 'workplace support' is detailed in the main storyline. Evidence and quotations of the 'experience of support' for each manager are given in Appendix V. Findings confirm the literature and Phase I results that social support has a direct effect on reducing work-related strain (Carlson & Perrewe, 1999; Stansfield et al, 2000). The qualitative findings demonstrate the importance of a supportive supervisor relationship in reducing stress. Low stress managers have mutually supportive relationships with their line manager. Of key importance in this reciprocal relationship is that the line manager is approachable, available, open, honest and trustworthy (Figs. 9.3-9.4, Appendix V). Low stress managers tend to ask for job support when they feel they need it. High stress managers do not ask for support because of difficulties in their relationship with their line manager or because of their individual beliefs and assumptions, for example:

- Self-imposed demands - *'I need to do it myself,' 'I can cope,' 'My strategies have always worked so far,' 'I can do things better than others.'*
- Self-determination to resolve problems – *'I'm a sticker, a hanger in,' 'You go until you drop.'*
- Self-efficacy or pride in resolving problems oneself
- Optimism – *'things will get better anyway.'*
- Stereotype/distorted beliefs about managers - *'As a manager you should ...' 'know everything', 'be the person that is mature', 'the person that carries everybody else.'*

- Fear of being judged negatively by others as *'a failure, weak, not coping, mentally ill, unreliable, written off in the job market.'*
- Wouldn't trust others to keep confidence, gossip.

Category: Fear Of Failure/Unrealistic Expectations
High Stress Female

> *'If you ask for support or you say you need support, it's almost like you've failed slightly, and they'll want to know 'Why?' I think you feel as a manager you shouldn't fail, you shouldn't need help, you are the manager, you know everything or you should know everything - and you don't!'*

12.10.1 Gender Differences In Support

The mean rating of the value of support for men (7.25 out of 10) is slightly lower than for women (8.8). However, all report that, ideally, they would value a potentially supportive, trusting relationship with their line manager. The women want a line manager to *'bounce ideas off.'* In addition, they report having a wider support network of friends and colleagues than the men. They value and utilise practical support, informational support, advice, guidance, and appraisal if, at times, they need it, it is available/offered, and they have no personal inhibitions about asking. Emotional support is perceived as helpful when pressure and strain are high and control low (Lazarus, 1999). The findings agree with the literature, suggesting that as part of their relational style, women are more likely to use support to manage pressure (Greenglass, 2002) and that women's health is related to the total number of supportive relationships they hold (Baruch, Biener & Barnett, 1987).

Along with a mutually supportive **team,** the men want a line manager who does not prevaricate, *'someone to kick issues around with,'* who is accountable and responsible. They perceive **practical support** as most helpful, followed by **informational support** and advice on political or wider organisational issues. Evidence suggests that emotional support is obtained at home and is not greatly valued at work by men. Appraisals are valued for personal and career development and setting objectives. Men are less likely to ask for support.

These gender differences support the literature on gender specific socialisation experiences. The female gender role allows the dependence on others with the masculine role puts a premium on strength and individuality (Greenglass, 2002).

12.10.2 Work/home Interface

A notable gender difference is that, for the men, the main support is their partner - *'I've got a very tolerant and understanding partner.'* Low stress females also report the benefits of supportive partners or a *'happy homelife.'* However, high stress females are notably the *'main*

breadwinner' and report low levels of support from their partners although they are expected to support the latter.

High Stress Female

> *'I've got a husband who always thought I would be home from work on time and listen to his problems when he's coming home from work. And now I've got problems and he's having to cope with me having problems as well! I've got stress, as well as he has from his job. And whereas he's normally found that I'm there to pat him on the back and say 'Don't worry,' now I suddenly need the support back. And it has affected homelife, the stress.'*

12.11 Theme: Coping

Question: What factors differentiate high from low stress category managers in terms of their coping strategies?

A case-study matrix of coping strategies for the twelve managers is shown in Appendix W, where coping strategies are categorised as coping behaviours, problem-focused coping, emotion-focused coping, support, and communication. Mediating factors such as personal philosophy, attitudes, beliefs, personal disposition, self-efficacy, and awareness are reported. The characteristics and coping styles of high and low stress managers have been summarised above in the 'fit' and 'unfit manager' core categories. Further differentiation of coping styles according to gender is listed in Appendix W (Figs. 10.3-10.4).

12.11.1 Women Managers' Coping Styles

Social support is a major contributor to coping for the women. They appear to be more aware of the pressures and value of balancing work and homelife. They also pay more attention to their **physical health** and more likely to exercise to stay healthy. Not only do the women use emotion-focused coping (usually if the problem is outside their control) but they also utilise and value practical, informational and problem-focused coping. However, on the whole, the women seem **less confident** under pressure and report less assertive coping behaviours than the males. They use more talk and diplomacy and have a greater need for **reassurance** concerning their decision-making. With regard to the concept of professional identity, the women appear **less clear about their roles** as managers, sometimes having unrealistic expectations about what they perceive, and what they think the organisation perceives, they **should** achieve as managers. They take things more personally, and are more likely to cry when frustrated (although they berate themselves for being stereotypical women or *'wimps'* for doing so) than express anger in the workplace. Influenced by male stereotypes in the workplace, the women do not want to be seen to express emotion.

Category: Pretending/Plodding On
High Stress Female

> *'I was just miserable, so miserable it's not true. And I would just sort of keep my chin up, and just sort of plod on, just keep going and just thinking 'You've got to try and pretend everything's okay', because it just felt that if I confessed to other people how unhappy I was, that would be the end of it, I would not then be able to pretend any more. All the time I could keep up a pretence it was okay, I could manage from one day to the next. That's probably how I coped, by pretending and knowing I could get out at some point.'*

12.11.2 Men's Coping Styles

Men, more than women, focus on being leaders of their teams. They also seem more driven to put pressure on themselves or accept pressure because of their desire to be successful and achieve in their careers and/or because of their values of duty, vocation and commitment. However, they expect to be rewarded in a fair way for their commitment and are angry when the psychological contract is not adhered to by the organisation. The men seem **less aware** of the physical implications of stress and may be dismissive about workplace pressures and the potentially negative effects on their physical health. Some rely on the energy and vigour of their youth, or rest and recuperation. The men are more likely to use alcohol and smoke rather than relieve tensions through talk or exercise, and tend to **express frustration and anger** rather than tears when under workplace pressure or conflict.

A notable difference is that the men are more likely to use **detachment, withdrawal,** or '**switching off**' as a key coping strategy. They place greater emphasis on problem-solving and are **more reluctant to ask for help** until they have really tried to solve the difficulty themselves. They expect help to be offered. All of the men, regardless of their recorded levels of strain, have a **sense of self-efficacy and are confident that they are good copers.** They believe they have effective management strategies and techniques to manage time and workload. However, they may rely on **old strategies** that have worked for them in their youth, forgetting that they are not looking after themselves physically or getting any younger.

Category: Analytical/Emotions Muddy The Waters
High Stress Male

> *'I am very much at the analytical end of the spectrum as opposed to the emotional. My team will sometimes find it quite amusing, quite how every single problem is analysed in detail and we go through a logical, objective, option appraisal and define what we do. I get very uncomfortable when emotions get fed into it. And it's a standing joke in the Team that if I suggest something I say 'I know that's a bit touchy-feely for me, but -'*
> *Interviewer: 'You apologise?'*
> *'Yes!'*

The following section considers some of the hypotheses arising from the qualitative findings, particularly those relating to the core categories in the storyline.

Testing Qualitative Hypotheses: Implications For Future Research

Several issues and testable hypotheses arising from the Phase II qualitative findings with respect to job stress in NHS managers will be articulated in this section, as a guide to future research in this area.

12.12 Fatigue

In relation to job stress, fatigue may be viewed as a response of vulnerable individuals to adverse factors such as high demands or workload. Fatigue and disruption of sleep patterns through worrying about work were widely reported as stress responses by managers in the qualitative interviews. Those managers whose mental health was measured as poor (high levels of strain) reported more extreme experiences of fatigue, i.e. exhaustion, in response to job demands than managers with low measures of strain. Future research could investigate the interaction of the variables of psychological distress (strain), work pressure (job stressors) and fatigue. It may be helpful to obtain a systemic estimate of the levels of fatigue in the larger sample of managers; to examine the relationship between fatigue and mental health as a function of occupational and work role factors in order to shed light on the nature of fatigue; and to test the relationship between mental health, work factors and fatigue, notably the proposition that fatigue arises from a combination of high psychological distress and high job demands or workload.

12.13 Burnout And Low Resources

In addition, the most highly stressed managers reported feeling depleted of their physical, emotional and cognitive energies. They associated job stress and strain with the lack of resources in the NHS, poor staffing, tight financial constraints, and demands exceeding capacity to deliver. The Shirom-Melamed Burnout Measure (S-MBM) (Shirom, 1989) measures burnout in the workplace as a combination of physical fatigue, emotional exhaustion and cognitive weariness. This is based on the Conservation of Resources Theory (COR) (Hobfoll & Shirom, 1993, 2000) that links stress at work to threats to resources (material, social and energetic). Using this model, future research in the NHS context could test the proposition that high levels of fatigue, exhaustion or burnout, will be related to perceptions of low-level resources for the managers.

12.14 Stress, Anger Expression-In, And Anger Expression-Out

Consistent with the qualitative study findings that the predominant stress emotion was anger; that both men and women managers reported seemingly Type A Behaviours; and that the men tended to express their anger more explicitly than the women; the following hypotheses could be tested in future research:

- Type A Behaviour Patterns in the managers will be positively associated with measures of anger (using the State-Trait Anger Expression Inventory (STAXI-2): Spielberger et al, 1999) and strain/psychological distress.
- It is expected that managers with high scores on feeling angry (similar to state anger per se); coupled with low scores on the two Expression–In anger states, feel like expressing anger – verbal (e.g. feel like screaming), and feel like expressing anger – physical (e.g. feel like hitting someone), will be related to high levels of strain.
- In addition, it is expected that there will be gender differences in anger scores, with women managers having higher scores on the Anger Expression–In Scales.

12.15 Personality And Stress

Some of the characteristics of the 'people-person' managers identified in the qualitative study i.e. those who stay fit despite being under considerable job pressure, could be assessed using the five factor model of personality (Costa & McCrae, 1990), and related to measures of strain. Accordingly, the personality dimensions of **Neuroticism** (conversely emotional stability: calm, secure, non-anxious), **Extraversion** (sociable, talkative, assertive, ambitious, active), **Openness** (imaginative, artistically sensitive, intellectual), **Agreeableness** (good natured, cooperative, trusting), and **Conscientious** (responsible, dependable, organised, persistent, achievement orientated) could be assessed. A 'people-person' or 'fit manager' experiencing low strain will be expected to have higher scores on extraversion, openness, agreeableness and conscientiousness and lower scores on neuroticism (conversely high emotional stability) than an 'unfit manager' who has higher levels of strain.

In addition, the California Personality Inventory (Gough, 1987), has scales of leadership ability, dominance, sociability, social presence, self acceptance, empathy, sense of well-being, tolerance, achievement, psychological mindedness, flexibility that we would expect to overlap with some of the 'fit manager' characteristics from the study. These factors or traits would be expected to influence a manager's resilience or vulnerability to stress.

12.16 The Sense Of Coherence (Perceptual Disposition Or Cognitive Style)

Sense of Coherence (SOC) is a dispositional orientation of perceiving and controlling the environment for meaningful and appropriate action. The Sense of Coherence Questionnaire (SOC-29) (Antonovsky, 1987) could be used to assess the NHS managers' ability to stay healthy despite experiencing considerable pressure in the workplace.

Managers with high SOCs will be expected to view their internal and external worlds as **comprehensible** (structured, predictable, explicable), **meaningful** (demands perceived as

challenges, worthy of investment and engagement), and **manageable** (confidence in resources to meet demands); are more likely to define stimuli as non-stressors, and when appraised as stressors, they are likely to be viewed as having low relevance (less threatening), feel less burdensome and the manager will feel less or shorter lived tension (strain). It is expected that a strong Sense of Coherence will buffer the managers against job stress. In addition, a strong SOC will moderate the relationship of exposure to and perception of job stressors with strain. SOC will also influence the use of general resistance resources against stress.

Future research could, therefore, test the relationships between Sense of Coherence, job stressors, perceived symptoms, psychological distress, and use of situational resources, such as workplace support, to lower tension and strain. It is expected that managers with high Sense of Coherence Scores will appraise demands within the hospital environment as comprehensible, meaningful and manageable (i.e. less threatening to their well being), mobilise their general resistance resources e.g. workplace support, to deal with potential job stressors, and experience lower levels of strain than managers with low SOCs. The following propositions could be tested:

- When confronted with chronic stressors, a manager with a strong SOC is more likely to respond behaviourally with adaptive behaviour, and better tension management with lower symptoms of strain and lower emotional and distress.
- The manager who has a high SOC will have developed a rich repertoire of general resistance resources (both behavioural aspects i.e. coping, support, and emotive aspects i.e. emotional regulation) to draw on to deal with stressors.
- The manager with a strong SOC is better able to judge the efficacy of his/her behaviours.

12.17 Hardiness

Managers with high levels of commitment, control and challenge in the qualitative study appeared to be more resilient to stress. A commitment to working in the NHS was particularly important for influencing the managers' tolerance of stress. Thus, components of 'Hardiness' could be evaluated for men and women managers with regard to the constructs of control, commitment and challenge and their influence on levels of strain. It is expected that, among the managers experiencing high levels of job pressure, those who feel committed to the NHS will remain healthier than those who are alienated. Those who view change (e.g. management restructuring) as a challenge will remain healthier than those who view it as a threat. Among those managers under stress, those who have a greater sense of control over what occurs will remain healthier than those who feel powerless in the face of external (e.g. government targets, decisions) forces.

12.18 Further hypotheses generated from the study may be tested, including:

- Managers with high levels of awareness of stress risks and potential hazards in the workplace will have lower levels of strain. Managers who put stress risk assessments (HSE, 2001) into practice will have lower levels of strain.
- Healthcare managers' sense of worthlessness and unhappiness (e.g. as measured on the GHQ-12 scales) is related to negative media images and perceptions of public attitudes to NHS managers.
- Managers who have a clear understanding of their role, tasks, and job descriptions (e.g. through management training specific to the NHS context) will experience lower levels of strain than those who do not.
- Managers with no children will suffer higher levels of stress, as they are less able to protect their boundaries of workload and hours of working.
- Those managers who utilise a confidential, trusting, listening, understanding and mutually rewarding reciprocal relationship with their line manager will experience lower levels of strain than those who do not.
- The personal and professional characteristics of a line manager influence their approachability and their utilisation by subordinates in terms of support in the workplace.
- Women managers, more than men, utilise social support in the workplace to help them cope with stress. Women managers have wider (formal and informal) social support networks in the workplace than men.
- Women managers have a lower sense of self-efficacy, more self-doubt, and need more reassurance than men in the workplace, and this is related to levels of strain.
- Men and women managers utilise problem solving as a coping strategy in the workplace to the same extent.
- Women use emotion-focused coping in the workplace when they feel powerless to change a stressful situation.
- Men more than women use detachment and withdrawal as a coping strategy and are less likely to ask for help in the workplace.
- A culture of trust in the organisation (particularly trusting relationships with managers' colleagues, supervisor, and subordinates) mediates the social exchange of work and reward.

Chapter 13: Methodological Issues

The objectives of this chapter are firstly, to evaluate the quality and procedural robustness of the Phase II qualitative analysis, and secondly, to consider the limitations and advantages of using a convergence of quantitative and qualitative methods in a study of job stress that is underpinned by the complex transactional model.

Phase II: Qualitative Study Evaluation - Richness, Rigour & Reliability

13.1 Qualitative research lays down its claim to acceptance by arguing for the importance of understanding the meaning of experience, actions and events as these are interpreted thorough the eyes of particular participants, researchers and subcultures, and for a sensitivity to the complexities of behaviour and meaning in the contexts where they typically or 'naturally' occur (Henwood, 1996:26). The strengths of qualitative research lie in its rich description and its attempts to produce meaningful accounts of local knowledge. Counterbalanced against this are the attendant dangers of subjectivity, poor reliability and anecdotalism (Henwood, 1996).

To some extent all discussions of methodology in the social sciences are influenced by the esteem afforded to detachment, objectivity and rationality – the guiding principles of sound research in Western science. In assessing the quality or legitimacy of qualitative research, most qualitative researchers share the conviction that the usual positivistic standards of 'good science' should be retained but require redefinition to fit the realities of qualitative research and the complexities of the social phenomena that we seek to understand. As yet there is no general consensus on the criteria for assessing the scientific rigour of qualitative research, although the following standards proposed by Miles and Huberman (1994:277) go some way to addressing these difficulties. These include standards of: objectivity/confirmability; internal validity/ credibility/authenticity; reliability/dependability/auditability; external validity/transferability/ fittingness; and utilisation/application/action-orientation. Some of these criteria are used to assess the 'goodness' or quality of the final emerging conclusions of the Phase II qualitative analysis.

13.2 Reliability, Confirmability & Objectivity

Reliability is a concept used to assess scientific rigour with the emphasis on the replicability of the study by others (LeCompte & Goetz, 1982). Probably no theory that deals with social phenomena is strictly reproducible, although many conditions may be similar. Qualitative researchers acknowledge that replicability must take into account the role of subjectivity and attempt to work with it in an open and transparent manner. Thus, in qualitative research, reliability refers to the degree to which, when the research is replicated with *similar* participants in *similar* contexts, the findings would be *similar* (Strauss & Corbin, 1990).

In the present study, the constructionist view of qualitative research acknowledges the multiple dimensions of subjectivity and is concerned to ground the generated knowledge in the participants' own worlds. However, the researcher's starting point of 'conscious subjectivity' is distinguished from accepting uncritically what the managers say. As a counselling psychologist, she has made explicit her clinical experience and theoretical knowledge of stress and sought to apply this in a sensitive, open and unbiased manner in a dialectical and active process of grounded theory generation. She has laid out her epistemological premise, speaking position, role and status. Accordingly, the conclusions are seen to depend on the subjects and conditions of inquiry rather that on the inquirer.

With respect to 'procedural trustworthiness' (Lincoln, 1990), the methods, sampling and analytic procedures in the present study have been explicit and visible, and there is a sufficiently detailed record to provide an audit trail. When undertaking the method, care has been taken to include reflexive memos of researcher ideas and subjectivity so that these may be considered should others replicate the study. This would allow hypotheses to be developed about any different findings that might occur.

13.3 Validity, Credibility & Authenticity

'By validity I mean truth; interpreted as the extent to which an account accurately represents the social phenomena to which it refers' (Hammersley, 1990:57). The criteria used in assessing the validity of qualitative research are somewhat different from those employed in the traditional, classic measurement orientated view of validity of experimental positivist psychology. Qualitative research, by contrast, is built on the assumption that the world of persons is a co-constructed reality (Gergen, 1985). Different participants in a social world each possess a somewhat different version of what is 'real' or 'true' for them. Thus, the qualitative researcher does not claim to build universal truths, but rather strives to generate meaningful local knowledge, and acknowledges the hermeneutic notion of multiple, partial and competing interpretations (Pidgeon, 1996).

McLeod (2003) lists some of the central issues in assessing the validity of qualitative research in the field of counselling psychology as: the adequacy of information given about the context of the study and procedures employed; the extent to which conceptualisation is explicitly grounded in the data; the credibility of the researcher; the degree to which the participants are empowered by the study; and the success with which conclusions have been triangulated against different sources of data. Some of these criteria have been covered above. Additionally, in order to help demonstrate validity criteria in the present qualitative study, the researcher aims to provide the reader with evidence for the conclusions drawn; the internal coherence of the findings (Eisner, 1991); and the systematic relationship of concepts (Strauss & Corbin, 1990).

An assessment of internal coherence is possible when the study is read by others with a critical objective eye, asking whether the study hangs together, makes sense and seems plausible (Stiles, 1993). In the present qualitative study, internal coherence is supported by the systematic use of grounded theory procedures, which have proven theoretical relevance (Fielding & Fielding, 1986) and give the study density, precision and a grounding in the data. Evidence of comprehensive data treatment and critical data analysis is provided in the detailed reporting of the constant comparative procedures and 'axial coding,' which involve inspecting and comparing all data fragments and verifying the relationships between categories. In addition, data displays (see Appendix) provide a visual format for framing key concepts and categories and presenting information systematically and coherently, enabling the reader to draw valid conclusions. The resulting analytic narrative is context-rich, meaningful (Denzin, 1989), conceptually coherent and supported by direct quotations. Findings are presented in terms of impressions or hypotheses rather than as indisputable 'fact.' Appropriate references to the literature are also used to validate the accuracy of the findings.

An assessment of persuasiveness is made by considering the degree to which the study offers a warranted and understandable explanation of the phenomena and rival interpretations are addressed. These criteria were evaluated positively by a number of people, including non-psychologist friends, colleagues and supervisor who read the research report and were asked to question the thinking and conclusions. Any concerns raised were not directed at the study but rather at how the conclusions might be acted upon and these views are considered in the final discussion.

13.4 Respondent Validation & Application

According to Glaser and Strauss (1967), the movement towards increased validity is captured by the notion that grounded theories should be recognizable, 'work,' 'fit,' and be of relevance to those studied. This, in part, relates to the sense of understanding or verstehen that may emerge from the study. This may be descriptive, interpretive, theoretical, or evaluative. The test of respondent validity involves taking the analysis back to the participants to enable them to check and comment on the researcher's interpretations. It is recognised that this test is highly subjective and readers may differ in the degree to which they regard the research accounts as authentic or providing insight. Henwood (1996) suggests that this is not an attempt to target absolute truth but to help gain a fuller understanding by including multiple viewpoints. In the present study, the participants agreed with the summary findings and found them insightful and practically useful to support their managerial roles.

With respect to their application in the workplace, the detailed findings have considerable value as supporting evidence (to put before the Trust Board) for developing a managerial mentoring programme, encouraging management training, personal coaching, and highlighting areas to target stress management interventions.

13.5 Triangulation

The rationale here is that if a number of sources of information are used to tackle a question the resulting answer is more likely to be an accurate, viable research strategy (Mathison, 1988). In the present study, the triangulation of complementary methods and data sources produced a number of generally converging conclusions. The findings were initially compared with those from two different sources within the same hospital - the CHI report (2001), and a report of the findings from thirteen organisational development workshops involving 200 multi-discipline Trust employees (Brookes, 2000). Their perceptions of job related pressures and organisational culture overlapped on the following constructs: competitiveness, lack of trust and support, many hidden agendas, poor decision-making, poor communication, last-minutism and crisis management. In addition, the job-related stress findings were also corroborated with clinical information pertaining to managers attending for psychological counselling within occupational health. More recently, the National NHS Staff Survey (NHSP, 2004), designed to collect the views of staff about their work and the healthcare organisation in which they work, reported that 42% of respondents within the present Trust had felt unwell as a result of stress at work. This compares with the 44% of managers who reported significantly high levels of strain in the present quantitative study and adds credibility to the findings of the overall study.

13.6 Closeness Of Fit/External Validity/Transferability

A qualitative evaluation of 'closeness of fit' is concerned with the degree to which the 'final product of analysis relates the social reality of those who have been observed' (Pidgeon et al, 1991:356). In the present study, the closeness of fit is addressed by the consistency of the final interpretations in the storyline, supported by evidence from quotations. This is extended by making the analytic process as transparent as possible, allowing readers to assess the trustworthiness of those interpretations and assessing the findings against prior theory, i.e. whether the results keep close to the verbal data and whether the theory that emerges can be integrated at a diverse level of abstraction.

The criterion of external validity relates to the extent to which the research findings can be generalised to the wider population of interest and applied to different settings. We need to know whether the study findings can be generalised or extrapolated to other NHS managers or to theories of job stress beyond the immediate study (Firestone, 1993). Whilst recognising that objective generalisation is not possible, it is important that this gap be considered. For instance,

Bryman (1988) argues that qualitative research follows a theoretical rather than the statistical logic of the quantitative paradigm, and hence validity should be couched in terms of the generalisability of cases to *theoretical propositions* rather than to populations or universes. Strauss and Corbin (1990) argue that the purpose of grounded theory is to specify the conditions that give rise to specific sets of actions/interactions pertaining to a phenomenon and the resulting consequences, and it is generalisable to those *specific situations only*. However, the more systematic and widespread the theoretical sampling and richness of the resulting descriptions, the greater its generalisability, precision and predictive capacity. Thus, it might be argued, although subjectively, that the present study has sufficient thick description for readers to assess its potential transferability and appropriateness for other settings (Miles & Huberman, 1994).

Alasuutari (1995:156-7) suggests that 'Generalisation is a word that should be reserved for surveys only. What can be analysed instead is how the researcher demonstrates that the analysis relates to things beyond the material at hand ..... **extrapolating** better captures the typical procedure in qualitative research.' Thus, although the findings of this study are not necessarily applicable to all UK managers, a realistic aim of future research would be to explore the degree to which the findings of the present study can be extrapolated to other NHS managers and contexts. Where all the constituent factors of this study are present, then one might expect the processes and outcomes of this study to be transferable, although not identical, to other situations and managers.

13.7 Using Computer-Aided Software

It is suggested that the use of computer-assisted analysis of qualitative data software (CAQDAS) N4 helped to improve the rigour and validity of the study through the consistent coding of data, the production of counts of phenomena, the search for deviant cases, and the avoidance of anecdotalism (Silverman, 2000). N4 automatically developed a log of analysis operations such as code construction, searches, retrievals and proposition testing, providing an audit trail that also included coded data, memos, displays and analytic text. All evidence was saved and may be produced to validate claims. More elaborate use of CAQDAS for supporting theory building and 'If .. then' hypotheses testing aided the development of the study as an interpretative work. CAQDAS also improved the study rigour by ensuring that comparison of cases was systematic rather than impressionistic, deepening the confidence in the final conclusions. However, it is important to bear in mind that the software is essentially a toolkit - the researcher does the thinking and complex interpretive analysis, not the software.

Evaluating The Use of Convergent Methodologies

This section evaluates the use of a conjoint quantitative and qualitative approach in the present study of job stress.

13.8 The present study was designed in two parts: a quantitative assessment of perceived stressors and strains followed by a qualitative exploration of healthcare managers' experiences and understandings of job stress in an NHS hospital Trust. This was in line with recommendations by Cooper et al (2001) that a convergence of methodologies could add to our knowledge of the stress coping process and provide a more detailed, relevant and contextualised account of the stressor-strain relationship than is possible using one methodology alone. They argue that both quantitative and qualitative approaches represent legitimate methodologies for work stress research, but sole reliance on a single method may result in an inability to explore certain dimensions and complexities of the stress experience, as set out in Lazarus' transactional model. For example, inferring the process of an individual's interpretation, a requirement frequently imposed by quantitative methods, in place of capturing the meaning from the person making it, fails to facilitate an understanding of those contextual issues fundamental to an understanding of the stress process.

Quantitative and qualitative methods both have advantages and limitations and each generates information that is not readily available using the other approach. It may be helpful to set these out before considering how they apply to the present bi-modal study.

13.9 Quantitative And Qualitative Approaches

Quantitative and qualitative approaches are often seen as distinctive, and possibly incommensurable research paradigms: the quantitative view (experimental, hypothetico-deductive, positivist and realist) and the qualitative view (naturalistic, contextual, interpretive and constructionist).

On the one hand, the quantitative paradigm is premised on the natural sciences seeking to establish objective knowledge of the universal laws of cause and effect through the testing of specific hypotheses against phenomena in the empirical world. Quantification is seen as the *sine qua non* of the natural science paradigm because it renders theoretical concepts 'observable,' manipulable and testable. Quantitative research claims validity through diminishing subjective judgment and emphasising the use of rigorous procedures, careful measurement, generalisable samples, specific observations, statistical tools and reliability.

On the other hand, the qualitative paradigm privileges the search for meaning, understanding or verstehen rather than abstract universal laws. It tends to assume a constructionist epistemology which points to ways in which knowledge is generated within networks of social activities and systems of socially constituted meanings. The gathering and analysis of non-numerical data is seen as desirable within this paradigm because it frees researchers to explore and be sensitive to the multiple interpretations and meanings which may be placed upon thought and behaviour when viewed in context and in their full complexity (Lincoln & Guba, 1985). Qualitative research seeks to persuade the reader through rich depiction of phenomena, overcoming the abstraction inherent in quantitative studies. Contextual qualitative research emphasises transaction, process and meaning, explaining phenomena with an emphasis on interpretation rather than objective reality. It may initiate new lines of thinking and provide fresh insight into aspects of phenomena.

The validity of quantitative research relates to the internal consistency and robustness of its measures, consistent with the idea of scientific rigour. According to these criteria, quantitative research is regarded as superior to qualitative research, which is more concerned with contextual meaning and relevance. Relevance refers to the utility of scientifically based knowledge in that it is conceived and communicated to practitioners in a manner relevant to their problems.

Cooper et al (2001) argue that the two approaches are not mutually exclusive. It is not a question of replacing one method with another but of using the methods individually and in conjunction to build on each other's strengths. A conjoint approach offers a way of fitting method to the transactional process model of stress in order to assess and explain its complexities. Thus, in the present study, a convergence of qualitative and quantitative techniques were used respectively to help capture both the healthcare managers' subjective experiences of stress in an NHS hospital context, their coping behaviours and stress emotions, and to measure the more objective reality of the situation in terms of the elements of the stressor-strain relationship. In Phase II, qualitative interviews and grounded theory were utilised as the main method of exploring the subtlety and richness of the stress-coping process through accessing personal meanings, appraisals and emotions. However, in Phase I, when the focus was on the measurement of the prevalence of stress among the managers and the identification of the different elements of the stressor-strain relationship, quantitative methods i.e. standardised self-report measures of stressors and strain, were more appropriate.

Combining quantitative and qualitative methods entails clearing several hurdles. There are, however, several arguments in favour of a middle ground that merges aspects of quantitative and qualitative methods, identifying how each can be used to support rather than compete

against the other - a stance that Rosenthal and Rosnow (1991) have referred to as methodological pluralism.

An outline of the technical, political, epistemological and theoretical arguments for conducting the present conjoint study on job stress is given below. Methodological criticisms and limitations of the present study are also considered.

13.10 Pragmatic, Persuasive And Political Arguments

One reason for adopting a principled mixture of quantitative and qualitative methods, a position that has been advocated by several psychologists (Smith, 1995; Green, 1995; Griffin, 1995; Hammersley, 1996; Silverman, 2000), has to do with obtaining permission, access, credibility, acceptability, appraisal and funding of research in a particular context, in this case an NHS hospital Trust. One cannot just assume that a qualitative approach to research will attain recognition and be acted upon in the workplace or in psychology. The process of making her ideas or analyses persuasive means that the researcher needs to engage in a dialogue with people with organisational power who may be committed mainly to the view that greater precision, value and validity accrue to the findings of quantitative research alone (Griffin & Phoenix, 1994). Having numerical data (Phase I) backed up by rich description (Phase II) may make her stress-reducing recommendations more persuasive.

13.11 Technical Arguments

The adoption of a bi-modal approach in the present study was also influenced by Bryman's (1988) technical argument that methods should be tailored to the particular problems and research questions that needed to be asked. The choice of numerical or non-numerical methods was based partly on pragmatic considerations, such as, the scope for and constraints upon operationalising particular variables, availability of time and resources, representative sample available, and the process and nature of questions to be asked. Hence, research problems assessing 'How much is there of X (e.g. stressors, strains)?' were usefully addressed by closed questionnaires, the use of numeric data and statistical tests of relationships. Conversely, other research questions e.g. 'What is your experience of X (e.g. job stress, support, coping)?' required the gathering and analysis of unstructured, non-numeric material using, for example, through qualitative interviews.

Thus, in Phase I of the present study, the use of well-validated, self-rating questionnaires offered a quantitative and technically appropriate way of measuring the prevalence of psychological strain, and the scale, severity and frequency of occupational stressors for a sample of managers in one NHS Trust. Numerical data enabled a comparison with the prevalence rates of stress amongst managers in other Trusts. The data also provided measurement criteria (levels

of job pressure and strain) on which to base the purposeful selection of a theoretical sample for a subsequent, more in-depth exploration of the managers' experiences of job stress in Phase II. However, with respect to the latter, qualitative interviews were technically more suited to capturing the managers' appraisals, understandings, perspectives, and emotional processes in greater depth and in their own terms.

The danger of the technical arguments is that they often implicitly assume that one would always carry out controlled experiments and use precise measures of the relevant variables, if one could do so. Accordingly, they tend to undervalue the potential of qualitative research in its own right.

13.12 Congruence With The Transactional Model

It is important to adopt methods of research that are congruent with the theoretical platform upon which the research is based in the first place, in this case, the transactional model of stress.

The transactional model emphasises the idea of stress as a process and sequence of events, identifying in a variety of ways the evaluative processes (appraisals and personal meanings) that express the relational-transactional nature of work stress and coping. Thus, a third and most important reason for adopting a bi-modal approach in the present study was to utilise methodologies that adequately capture and enhance our understanding of the contextual richness of the stress coping process, as expressed in the transactional model. This is linked to the epistemological version of the methodology debate in that the gathering, analysis and interpretation of data are always carried out within some broader understanding of what constitutes legitimate inquiry and warrantable knowledge. Here the researcher asks Whose reality is being assessed? and Do the measures accurately focus on the key components of the stress transactions?

These questions suggest that conventional measures may not adequately capture the complexity of the stress process and should be free of the structural limitations imposed by traditional conventions. In addition, by emphasising the reliability and robustness of quantitative measures, item relevance, meaning and significance to the target individuals may be overlooked. The transactional model of stress suggests that research should extend beyond simply identifying what are considered to be the key structural aspects of the stressors strain relationship, and be directed toward exploring these characteristics that define the process and represent the essence of the person-environment transaction (Cooper et al, 2001:212).

Although the researcher espouses the transactional model of stress at a conceptual level, the use of a standardised survey and statistical methods in Phase I may be depicted as reflecting an interactional model of stress, where stressors and strain components are treated as static

constructs having unidirectional effects. Useful as it is in identifying the critical constructs that any predicative model should deal with (Dewe, 1991), quantifying the amount of variance accounted for in a criterion variable (strain) by a set of predictor variables (stressors) may not provide adequate information to explain *stress as a process*. Furthermore, personal (dispositional) characteristics that may be contributing to the type and amount of strain experienced need assessing (a limitation of the present Phase I survey). In addition, when selecting measures for use in job stress research, it is important to consider whether these measures do in fact capture the reality of those who will complete them. For instance, many quantitative approaches implicitly assume that predefined variables e.g. job stress, coping, strain, support, have the same meaning across multiple settings.

In contrast, a qualitative approach and, in particular, grounded theory, offers a means of exploring the transactional nature of the stress constructs and stress as a *process*. Additionally, a qualitative approach attempts to increase understanding of local perceptions and experiences, to 'explicate the ways people in particular settings come to understand, account for, take action and otherwise manage their day-to-day situations' (Miles & Huberman, 1994:7). A research orientation focusing on individual perceptions and experiences is thus particularly relevant to studying job stress, a construct that deals with employees' perceived worlds. It allows access to appraisals, beliefs, attitudes, meanings and emotions that influence the processual nature of stress-coping transactions in the workplace. The suggestion is that qualitative research is very helpful for exploring the *local meanings* of phenomena and the interactions or transactions that create these meanings. In job stress studies, such exploration stimulates the development of new understandings about the variety and depth with which organisational members, in this case healthcare managers, experience salient organisational phenomena and how this impacts on their health and well-being.

13.13 Usefulness Of The Conjoint Approach In The Present Study

The convergence of qualitative and quantitative techniques used in the present study helped respectively to capture the healthcare managers' subjective experiences of stress in an NHS hospital context, their coping behaviours and stress emotions, and to measure the more objective reality of the situation in terms of the elements of the stressor strain relationship. The findings suggest that the bi-modal study was helpful sequentially with the results of the quantitative survey informing the Phase II sample selection and interview construction. The qualitative methods enabled the confirmation and elaboration of the Phase I survey results, enhancing the comprehensiveness and generalisability of the findings and our understanding of job stress. Each method was strengthened by using the intrinsic qualities of the other, enhancing the validity, rigour and persuasiveness of the overall study.

13.13.1 Phase I

With respect to the elements of the stressor-strain relationship, the Phase I quantitative survey identified some working conditions that were potentially stressful, such as insufficient personnel, frequent interruptions and fellow workers not doing their job. Statistical techniques demonstrated significantly high levels of strain amongst the sample of managers and allowed the comparison of prevalence rates with those from other studies and Trusts. Significant correlational relationships were found between job pressure, job stress frequency and lack of support and strain indexes. The quantitative model was also helpful for identifying some broad situational factors (lack of support) and individual differences (gender, age) that may predict or moderate the stressor-strain relationship.

13.13.2 Phase II

The qualitative approach of Phase II provided a detailed analysis of the subjective experience of job stress for some of managers who felt under considerable pressure at work; analysed textual data systematically with grounded theory strategies; and deepened the Phase I survey findings. A consideration of the managers' own accounts using semi-structured interviews helped bring their personal experiences of job stress into sharper focus; to explore elements of the stress-coping and support processes in greater depth, including the influence of dispositional characteristics and the impact of the organisational restructuring process; and to provide further evidence of job stressors and their psycho-physical and emotional consequences for managers in an NHS hospital context. The qualitative data helped to validate, interpret, clarify and illustrate the quantitative findings, as well as furthering our understanding of stress, and suggesting hypotheses in terms of the constructs of the 'fit manager' and stress awareness.

13.14 Conjoint Approach Conclusions

In sum, the findings suggest that an exploration of the transactional perspective on stress-coping health and emotions is enhanced by a conjoint approach that incorporates contextual factors, dispositional variables, and examines the range of potential stressors impinging on the person. A convergence of quantitative and qualitative methods offers instrument validity, item relevance and significance to the target individuals, and enhances the breadth and scope of the overall study. Whilst both methods have advantages and limitations, they can be used in conjunction to build on each other's strengths and help further our understanding of complex stress-coping processes, for example, with possible explanations as to how some managers cope and stay healthy despite being under considerable pressure in the workplace. Greater insight into the transactional nature of stress will aid the development of strategic stress management interventions.

Limitations Of The Present Study

13.14 Problems Of Measurement And Meaning

The problems of subjectivity and evaluation of qualitative research have already been considered in some detail. This final section on methodological issues, evaluates the use of the self-rating questionnaires in the present study with respect to the issues raised above that suggest that conventional measures may be too blunt (Cooper et al, 2001) to capture the complexity of the transactional stress process. Further limitations of the present study are highlighted and suggestions made as to how the methodology may have been improved.

In the Phase I survey, the standard self-report instruments of the General Health Questionnaire (GHQ-12) and the Job Stress Survey (JSS), used to assess psychological ill health and job stressors, tap generic indicators of strain and stressors respectively. This reflects a tendency to regard the stressors and strains that individuals experience as being the same irrespective of the context in which they arise and of the stressors confronting them. The use of generic instruments may lead to the erroneous conclusion that managers who manifest the same score have a common experience of those stressors, when, in fact, their experiences may vary considerably. This reduces confidence in the ecological validity of the findings, and raises questions about the salience and appropriateness of any targeted interventions to alleviate job strain within that particular context.

Another limitation of generic stress measures is that they do not incorporate primary appraisal i.e. the way individuals interpret and give meaning to demanding events. The JSS, for example, is concerned with 'How *much* is there of X? rather than *Why* is X a problem for you? One outcome of this omission is that the subjective meaning of events, which may be an even more salient predictor of strain response than the occurrence, is overlooked and effectively discounted in stress research. Qualitative interviews, on the other hand, may enquire into appraisals, beliefs and the subjective meaning of stressful events and may reveal personally salient predictors of strain and explanations of behaviour, for instance, in Phase II, asking for help (support) in the workplace is appraised negatively by the managers in terms of fear of failure and being judged as weak.

The present study may also be criticised for focusing solely on workplace stress. Cooper et al (2001) argue that stress research should adopt a holistic perspective that takes into account the totality of a person's life space rather than simply assessing one domain in isolation. The use of generic measures in Phase I means that the researcher was unable to differentiate between forms of strain arising in the workplace, the family environment, or some other setting. Consequently, the Phase I survey provided limited knowledge about the manifestations of strain and stress

emotions and the possibility that the kind of strain experienced in the hospital environment might differ from that experienced in a manager's home or at work. In addition, although the study uncovered a statistically significant relationship between lack of workplace support and strain, we cannot be certain that this is the main determinant of strain for the subjects under investigation. Family pressures, life crises, financial, health problems, etc may affect predictors of the managers' affective reactions at the time of measurement.

Another limitation of the quantitative study is that, although work stressors are conceptualised in terms of demand, the self-rating scales 'imply' or infer demand rather than measure it, leading to an oversimplification of stressors. Aspects of stressors, such as frequency, duration, intensity and meaning may not be assessed (Cooper et al, 2001). The attraction of the Job Stress Survey (JSS) is that it measures both severity and frequency of generic work-related problems (stressors), together with perceived job pressure and organisational support. In addition, it was designed for use with managerial, professional and clerical employees. However, the JSS results in the present study were tested against norms from a US managerial group (as there are no published UK norms), thereby diminishing their significance and limiting their generalisability to other UK healthcare managers.

With respect to measures of strain in the present study, a conservative threshold of significant stress was specifically adopted according to GHQ-12 validity studies carried out in the NHS (Hardy et al, 1999) and the recommendation from the longitudinal study of stress in the NHS by Borrill et al (1998). This was to allow comparison with other healthcare managerial groups. The prevalence was found to be particularly high (46.8%) for the managers in the present study. This might imply too low a threshold of 'caseness' despite the recommendations of earlier research. A recent study in the Trust has found overall levels of stress to be 42%, adding support to the present study findings. However, confidence in the present study findings may be reduced by the inherent subjectivity of self-report measures overall and the possible confounding effects of any subject negative affectivity or responder bias.

Given that personal (dispositional) characteristics may be contributing to the nature and extent of strain experienced by the managers, the inclusion of validated personality questionnaires such as those measuring the 'Big Five' factors - Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness - that influence a person's vulnerability or resilience to stress, may have added a valuable dimension to the findings. It may have been of significant interest to test the relationship between personality variables and stress using validated questionnaires, such as the CPI, the EPQ-R, the NEO-PI-R, or the 16PF5. In addition, measures

of Type A Behaviour, and the expression of anger using the State-Trait Anger Expression Inventory (STAXI-2) would have been useful in Phase I, as anger was found to be a major stress emotion in the subsequent qualitative study. In addition to personality variables, it may also have been useful to build into the survey several subject-related 'internal negative factors' such as inadequate training and incompetence. The inclusion of indications of the managers' work history and experience, their years of service, and rates of promotion may also have added confidence to the findings.

The findings of longitudinal studies, such as that by Borrill et al (1996, 1998), offer greater validity and confidence concerning the possible causal relationship between stressors and strain. The present study is not longitudinal, stressors and strains are assessed at one point only, and therefore we can make **inferences** only about the findings that suggest that the NHS hospital environment is highly stressful for the managers and may negatively affect their mental health. With respect to the relationships between stressors and strain, the measures are correlational and hence do not imply causation. In addition, the statistical relationships between stressors and strain in the study findings are relatively weak.

It may also be helpful to consider whether concern over the reliability of measures has taken precedence over their relevance to individuals' lives. Incorporating qualitative methodology into a bi-modal approach may assist in the development of taxonomies of work related stressors that reflect the reality of the NHS managers whose working lives are being investigated, aid the comparison of these stressors with those most often studied in job stress research, and the development of strategic stress management interventions to enhance workplace well-being.

Chapter 14: Final Discussion & Conclusions

14.1 Introduction

The aim of Phase II was to elaborate and deepen the findings of the Phase I survey through a qualitative exploration of the job stress experiences of a small sample of purposefully selected managers. A further aim was to explore the individual differences that influence the job-stressor-strain relationship and explain how some managers cope with intense and frequent job pressures and stay healthy. The questions were addressed within a low stress - high stress dimensional framework in which the coping characteristics of the low stress category managers acted as a benchmark of coping efficacy. Within this framework the study examined job pressures, consequences of stress, and coping styles. The use of workplace support and the supervisor relationship was a particular focus for Phase II, having been identified as a significant predictor of mental health in Phase I.

This section begins with an overview and discussion of the Phase II qualitative findings as they relate to: the study's central research questions; the Phase I results; the literature; and possible recommendations for future stress research and targeted interventions. Since these results have been presented in detail above, only the central themes emerging will be discussed.

14.2 Discussion

With respect to job and **managerial role stressors**, the Phase II findings corroborate the findings of the Phase I survey that the sample of managers experience numerous, frequent and intense job stressors. Extended hours of work are confirmed as relating to the pressures of heavy workloads, crises, frequent interruptions and deadlines. The long hours have considerable negative health and fatigue implications for the managers (Harrington, 2001; Hardy et al, 1997). Perceived loss of control and decision latitude, particularly during the management restructuring, also have negative implications for the stressor-strain-health relationship and support the literature (Karasek, 1979). There is no evidence to support the literature view (Korabik & Van Kampen, 1995) that women managers report being subjected to significantly more job stressors than men in comparable positions. However, gender is an important variable in determining how different workplace stressor items are perceived and reacted to by the managers. For example, poor or inadequate supervisory support and interpersonal conflict appear to cause more job stress for women than for men in line with Narayanan et al, (1999) and new and unfamiliar duties are reported as more severely stressful by men.

With respect to those **job stressors** that are specific to an **NHS hospital trust environment**, the qualitative findings elaborate and support the literature (Webster, 2002), particularly with regard to the tensions reported between delivering government targets and high quality care, ethical

decision-making, limited resources and staffing. The findings also support the HSE (2001) recommendations that psychosocial hazard measures in organisations should be based on local knowledge and understanding of the specific context, for example, with regard to demands exceeding capacity in the present hospital. In addition, the perceived negative perceptions and representation of NHS managers by the public and media support the findings of Learmonth (1997) in acting as role stressors. Being perceived as the 'whipping boy' for the frustrations of other NHS employee's and service users, and bearing the brunt of their colleagues' Type A hostile behaviours (Friedman & Rosenman, 1974) represent further challenges to the managers, highlighting the need for policies on aggression in the workplace and changes in cultural norms and 'corporate masculinity' (Maier, 1991).

The particular intensity of the pressures of the **restructuring** process supports the literature on the psychological contract (Rousseau, 1995) and the imbalance of the social exchange process (Siegrist, 1998). Perceived breaches of contract with regard to the manager's expectations of the organisation were reported during the restructuring, causing increased pressures, fatigue and psychological distress. For example, increased workload, reduced trust, uncertainty, and the threat of redundancy required individuals to make a greater investment in the employment relationship with no promise of additional return. Findings support a growing body of literature that recognizes that '*trust*' and '*behavioural integrity*' play a central role in employment relationships (Simons, 2002), loyalty, goodwill and support (Aryee et al, 2000). The findings also agree with Karambayya (2002) who suggests that women may be exposed to additional stressors during restructuring as they lose their own support networks; they perceive that they are 'expected to' support others more; and the organisational culture becomes more masculine in terms of competition

With respect to **consequences of stress**, the Phase II qualitative findings elaborate the survey results. *Fatigue* and *exhaustion* are associated with high levels of psychological strain (Hardy et al, 1997) together with worrying, low frustration tolerance, tension and irritability. Increased workload pressures leave little time for exercise. The analysis supports the consistent findings in mental health surveys that women tend to experience significantly more symptoms than men (Tuosignant, Brousseau & Tremblay, 1987). Women are generally higher users of medical services and report more psychological distress and somatic disorders such as insomnia, nervousness, headaches, pounding heart, than men (Jenkins, 1991).

The findings support the literature view that men reportedly neglect their **healthcare** in terms of nutrition, exercise, relaxation and stress management. In the present sample, men are more likely to smoke and use alcohol in stressful situations than women (Nelson & Burke, 2000), increasing their risk of health problems (but reportedly gaining the benefit of 'smokeroom'

network support). Women managers in this sample appear to be more aware of health issues but those highly stressed females report limited time available to practice health maintenance and exercise (Lindquist, Beilin & Knuiman, 1997). Men seem less physically aware, use denial, or postpone their health concerns until their stress-related symptoms are severe. This fits with the review by Burke (2002) that men have been socialised to ignore physical symptoms that lead to illness. The male gender role depicts men as tireless, achieving workers without limits. Asking for help may be associated with femininity.

With respect to the **emotional consequences** of stress, the domains of *anger* and *low frustration tolerance* are most frequently reported by this sample. Findings are consistent with the view that anger is the most common pathway for strong feelings for the men (Pollack, 1998) and, together with anxiety, is associated with male gender role stress (Eisler & Skidmore, 1987), and high Type A psychosocial and somatic risk (Lash, Eisler & Schulman, 1990). Type A behaviour is linked with increased risk of coronary heart disease in both sexes (Borysenko, 1987). Originally thought to be a male phenomenon, Type A behaviours of aggressiveness, competitiveness and achievement striving with their associated health risks are found increasingly among female managers (Matuszek et al, 1995) in masculine work cultures. There is some evidence of this type of work culture and Type A behaviour for both genders in this study, together with the expression of anger as a stress-emotion. This raises some concern and could be tested quantitatively.

Stress-emotions in this study are reported as a sense of loss, inability to cope, loss of control, disaffection, not feeling valued, feeling worthless, powerless, and failure. Negative emotions are seen to arise out of the appraisal of threat and inability to cope, supporting the transactional model of stress (Lazarus, 1999). Both men and women managers are averse to expressing tears or emotional distress in the workplace because of fear of being judged as a failure, possibly demonstrating evidence of a masculine work culture. The men, conforming to male gender stereotypes, say they are less comfortable with emotional issues concerning themselves and their staff and take issues home to their partners. Both men and women report the negative effects of working long hours on their homelife, including fatigue, guilt and regret about time lost with their children. The effect of work and family time allocation on psychological well-being is relatively unexplored in the literature.

With respect to the **coping strategies** of this sample of managers, the findings support the literature in that the main variables accounting for differential health outcomes are the use of flexible, **problem-focused** coping strategies that address stressful situations, together with **emotion-focused** coping strategies that help manage feelings and reactions to the stressful events (Latack, Kinicki & Prussia, 1995). Traditional managerial skills such as time

management, planning and organisation are utilised by those managers reporting low job strain, together with the use of 'people-person' or relationship/communication skills such as diplomacy, respect, negotiating and listening.

Although generally associated with female gender roles, both low stress male and female managers report using people-skills. Emotion-focused coping is valued and used (with someone they can trust) by the women when they are in situations with less control and/or they are already suffering from high levels of job-related strain, in order to produce the best adaptational outcomes, supporting the view of Lazarus (1999). The main gender difference in coping style is that, whilst the women tend to use **both** problem and emotion-focused coping strategies, the men use **predominately problem-focused** strategies and prefer to solve the problems themselves, not asking for help if they can avoid doing so. This is consistent with the literature in that the men demonstrate a decreased likelihood of asking for help (Good, Dell & Mintz, 1989) and use withdrawal and detachment as a way of coping. These findings indicate, in line with Greenglass (2002), that when women and men both occupy managerial positions, or jobs equivalent in decision-making latitude, access to resources, and control, they may utilise **problem-solving** to the same extent.

With respect to **workplace support**, the quality of the managers' professional and personal **relationships** appears to be of central importance in the prediction of their psychological health status and confirms the findings of the Phase I study and of Viswesvaran et al, (1999) and Spielberger et al, (2002). The 'people-person' managers, i.e. those who report less troublesome work relationships and positive relationships with co-workers, supervisors and subordinates, report fewer health problems and lower levels of strain. The findings are also consistent with the literature suggesting that women, more than men, utilise social support when coping with stress. Women are more likely than men to seek and ask for advice, information, practical assistance and emotional support from others in the workplace (Greenglass et al, 1999). This is also consistent with gender role socialisation since women are expected to be more interdependent and sensitive to others (Greenglass, 1982). Equally, while many men prefer to rely on the support of their team and supervisor, the women benefit from formal supervisor and informal co-worker and friends' support in the workplace (Etzion, 1984) as the basis for a range of constructive coping activities (Greenglass, 1993). Effective male copers report that they *do* value workplace support but expect it to be offered rather than to ask for help, delaying asking in line with masculine gender role stereotypes.

With respect to the **family domain**, the managers' reports on the interference of work with homelife and vice versa are conservative. Findings support the literature that men perceive more social support to be available at home than do women (Thomas & Ganster, 1995) and women

continue to perceive themselves as taking more responsible than their partners within the family domain (Perrewe & Carlson, 2002). In particular, those women managers who are the main breadwinners and report giving more social support to their spouses than they receive, also report higher levels of physical and psychological distress than their comparators. Managers with no children report higher levels of stress as they are reportably less able to protect their boundaries of workload and hours of working.

With respect to **personality characteristics, attitudes and beliefs** related to coping responses that have been found to help the managers resist the deleterious effects of stress, the Phase II findings lend support to the models of self-efficacy (Bandura, 1977, 1997), hardiness (Maddi & Kobasa, 1984,), hope (Hunt Raleigh, 2000), learned resourcefulness (Rosenbaum, 1990), optimism (Scheier & Carver, 1992), the ability to think constructively (Epstein & Meier, 1989) and the sense of coherence (Antonovsky, 1979). Thus, the constructs of self-belief, commitment, comprehensibility, manageability, challenge, control, hope and meaning appear to be important in constructing a *robust* and *resilient personality style* that helps managers deal more effectively with workplace pressures. However, it is important that the managers raise their awareness of the work–stress process and define their limits of tolerance and boundaries in the social exchange of work as over-involvement appears to have negative implications for their physical and mental health.

The results also suggest that the more experienced people are in their managerial tasks, the greater their self-efficacy. These findings lend some support to those of Wells-Parker et al, (1990) who showed that for women, negative outcome expectancies or low self-efficacy are the main predictors of active or passive coping orientations in relation to occupational roles. Women managers demonstrate more self-doubt and need for reassurance, which may affect their experience of strain if support is not available.

14.3 Summary of Key Findings

- A high proportion of general managers (46.8%) in this sample demonstrate significantly high levels of psychological ill health.
- The prevalence of psychological ill health among the sample of general managers (46.8%) is significantly higher than among comparable NHS managers (32.8%) and managers in the general working population (21.3%).
- Managerial role stressors particular to an NHS hospital environment are confirmed as the tensions between delivering government targets and high quality care and limited capacity.
- Media criticism and negative press images of NHS managers are generally dispiriting.

- Organisational restructuring is confirmed as a time of particular stress, challenge and uncertainty.
- The perceived violations of the psychological contract appear to cause considerable anger, loss of trust and distress.
- Anger is the most prevalent stress emotion and women, more than men, find workplace aggression hard to deal with.
- The most severe work-related stressors identified are: insufficient personnel, fellow workers not doing their job, and frequent interruptions. Most frequent job stressors are: meeting deadlines, working overtime and interruptions.
- Heavy work demands tend to lead to a long hours culture and associated negative health implications.
- The main predictors of psychological ill health in the workplace are job pressure, gender, no children, being younger, lack of support, and poorly motivated co-workers.
- Women managers have significantly higher levels of psychological ill health than men.
- Both men and women use problem-focused and emotion-focused coping strategies.
- Emotion-focused coping is valued more by the women but all the managers are wary of expressing emotion in the workplace because of negative perceptions of failure.
- The key support figure in the workplace is the supervisor (line manager).
- Women tend to have wider support networks than men and are more likely to ask for help.
- The men tend to obtain their main emotional support at home.

14.4 The Study Findings And Stress Theory

With respect to **stress theory** and the **transactional model of stress**, the findings support the view that stress resides neither solely in the environment nor in the individual, but in the relationship between the two. The study reveals the importance of researching the moderating or mediating role of personality, environment and social support variables if we are to account for and explain the differential health outcomes in the stressor-strain-coping relationship. The transactional model provides a framework for explaining the differential health outcomes in the present study, with those 'fit' managers applying a broad range of coping strategies and use of support, moderated by robust, resilient personality and dispositional variables that act as resistance resources to reduce stress. Social support, particularly supervisor support, is a major contributor to coping and this effect is mediated by gender and 'trust.' The importance of the quality of professional and personal relationships in terms of women managers' healthy functioning and the men's resistance to asking for help is also underlined.

The study reveals that the most **psychologically fit** managers are those who cope with stress using a combination of male and female (rather gender stereotype) attitudes and behaviours, including pragmatism, assertiveness, control, awareness, reciprocal relationships, support, communication, listening, balancing work/homelife and a body/mind, health/nutrition/exercise practical and attentional focus. Key constructs are awareness, optimism, trust, balance and the application of protective boundaries and limits of tolerance. There is some support for and elaboration of the personality style of 'hardiness' with the fit managers reporting the resistance resources of commitment, challenge and control, combined with the 'sense of coherence' constructs of meaning, manageability and comprehensibility of their world. Realistic expectations of the organisation, other people and one's self as a manager (professional identify and self efficacy) are also important for protecting one's boundaries in the workplace.

14.5 Recommendations Arising From The Study

With respect to **recommendations for further research**, the limitations of the present study point to the need for further investigation at both an individual and organisational level of the roles of affect - particularly anger, (managerial) professional identity, the psychological contract, and the construct of 'trust' (Simons, 2002; Aryee et al, 2002) in the work stress process. The Salutogenesis model (Antonovsky, 1979), based on human strengths rather than weaknesses (Aspinall & Staudinger, 2003) and which describes the process of staying healthy despite exposure to stress, demonstrates the potential to be useful in stress studies and further research exploring the sense of coherence construct is recommended.

The results support the literature that women in the workplace are more at risk from managerial stressors than their male counterparts. Overall, the evidence clearly indicates that there are differences between the psychological, physiological and behavioural reactions of men and women to stressors (Fielden & Cooper, 2002), which appear to conform to gender role stereotypes. These gender differences are thought to be due to gender specific socialisation experiences, which suggest that the female gender role allows dependence on others whilst the masculine role puts a premium on strength and individuality (Greenglass, 2002). Jamieson (1998) argues that, in order to achieve success, women typically have to adapt to the organisational culture by taking on masculine values and attitudes, becoming masculine in their gender role orientations. This may place additional pressures on the women. Thus, we may speculate that the findings of gender differences in health outcomes in the present study may reflect the women managers' willingness to report strain, something about a masculine work culture - possibly competition, conflict/aggression - that increases pressure and is not supportive, or the pressure of additional demands at home. Further research is needed with respect to **stress, managers** and **gender differences** in the organisation (Sandelands, 2002).

With respect to **recommendations for action**, ultimately the value of this job stress research will be judged by its contribution to the enhancement of the manager's health and well-being as well as organisational productivity and effectiveness. The onus rests with stress researchers to conduct stress research that contributes to the development of more 'healthy' work environments that enable individuals and organisations to alleviate the negative effects of stressors when they cannot avoid them altogether. This study has demonstrated that working as a manager in the NHS may create strain and lead to ill health and reduced well-being. This has considerable implications for the economic and productivity costs to the NHS. The study has also demonstrated that three main sets of variables - environmental, social and personality centred - jointly influence the experience of work stress for the managers. Thus any attempt to improve their health and well-being needs to comprehensively and systematically address any potential stressors at these different levels, possibly through risk management procedures (HSE, 2001), coaching (Neenan & Dryden, 2002) and mentoring (Murray & Owen, 1991; Whittaker et al, 2000). Stress management programmes need to target the individual as well as the organisation (Dewe & O'Driscoll, 2002), to be based on theories of stress as a process, and to consider the characteristics and participation of the community being investigated so that the interventions meet the specific needs of those concerned (Reynolds & Briner, 1994).

With respect to present study, the needs of the managers may be addressed in the first instance by feeding back the findings to the management community and the development of specific stress management action plans by a focus group. Interventions will aim to address those high intensity job stressors that occur most often (Turnage & Spielberger, 1991). The feedback will aim to **raise awareness** of the health implications with respect to work-related stress, the psychological contract, the restructuring process, and the experience of the organisational culture, particularly regarding the construct of 'trust' in the social exchange of work and support. Training on the construct of **'professional identity'** is also recommended (Tajfel & Turner, 1979; Brown, 1984; Lobel & StClair, 1992). Unless the managers are knowledgeable of the boundaries of their professional identity and roles, they will not know what to expect of themselves, or what others may expect of them in the workplace.

As lack of support is overwhelmingly implicated as a risk factor for stress, the main recommendation is to raise awareness of the importance of the supervisor relationship and to establish a management **mentoring** system. Mentoring would offer a confidential, supportive relationship focusing on the managers' personal and professional development, enabling them to deliver personal and professional goals aligned with organisational purposes and values.

14.6 Conclusion

This study developed out of a desire, firstly to identify and understand the extent and nature of the workplace challenges currently facing healthcare managers in a large general hospital, and secondly, to identify strategies and make recommendations that may be useful in the management of those job stressors. At the heart of this process has been an attempt to address the uniqueness of the managers' experience within a reliable and robust methodological framework. The search for a measure of the prevalence of stress among the NHS managers together with an 'authentic' understanding of the managers' experiences, what they do to cope and why, pointed to a bi-modal approach combining statistical techniques together with a more personal, individual approach through in-depth interviewing and grounded theory analysis. This convergence of methodologies has, hopefully, captured the depth and richness of the managers' experiences, advanced our knowledge of stress-coping processes, and provided a more detailed account of stressor-strain-health relationships than would have been possible using one methodology alone.

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Section C: A Multimodal Assessment & Rational Emotive Behavioural Approach to Stress Counselling & Stress Management.[11]

A Case Study

Volume I

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Section C: A Multimodal Assessment & Rational Emotive Behavioural Approach to Stress Counselling & Stress Management - A Case Study

1. Introduction

The struggle to adapt to the pressures of every-day life can be labelled 'stress' (R Lazarus[12], 1999). It is widely accepted that the experience of stress, particularly chronic stress, takes a significant toll on the well-being of individuals in terms of their mental and physical health as well as their social and occupational functioning (Cooper, Dewe & O'Driscoll, 2001). Working with patients suffering from chronic stress problems is inherently complicated as individuals usually present with a broad range of psychological and physical symptoms, moods and behaviours. Psychological aspects of stress or 'distress' may include anxiety, panic and depression with co-existing negative emotions and maladaptive behaviours. Stress impairs cognitive functioning and the ability to get work done. Physiological indicators of stress include changes in levels of adrenaline, noradrenaline and cortisol, raised blood pressure, palpitations, muskulo-skeletal pain, headaches, sweating, nausea, digestive problems, insomnia and hyperventilation. In addition, chronic stress has been linked to the onset of diseases such as cardiovascular conditions, cancer, colds, irritable bowel syndrome, ulcerative colitis, arthritis and skin disorders (Pelletier, 1995; Leonard & Miller, 1995; Lovallo, 1997; Witek-Janusek & Mathews, 2000). Recurrent and intense stress will increase the incidence and severity of symptoms which may, in turn become the focus of secondary disturbances (e.g. anxiety about hypertension).

In my experience, it is the presentation of numerous concurrent clinical and psycho-social concerns that makes a particular stress treatment case 'complicated.' The lack of a single clear point of intervention, coupled with the typical therapist's desire to alleviate all of the patient's problems, may lead the therapist to errantly engage in a series of unsystematic attempts to deal with the multiple problems. Ideally, sound treatment of patients suffering from stress will address problems in each area. Practically, implementation of such a comprehensive approach presents numerous therapeutic challenges.

2. Therapeutic Models

2.1 The Multimodal Approach developed by Arnold Lazarus[13] (1989, 1997) offers a comprehensive, technically eclectic and systematic framework for assessment and treatment of the multiple symptoms exhibited by people suffering from 'stress.' It assumes that few

[12] Refers to Richard Lazarus' transactional theory of stress outlined in Chapter 2 of the present research study.
[13] Refers to Arnold Lazarus' multimodal model of psychotherapy.

problems have a single cause or unitary cure and that human distress is multileveled and multilayered. It advocates that treatment should involve the systematic use of a variety of therapeutic interventions tailored to the individual needs of each client rather than to the theoretical and personal predisposition of the therapist. These individual requirements are determined by assessing the client across seven discrete but interactive modalities represented by their Behaviours, Affective processes, Sensations, Images, Cognitions, Interpersonal relationships and Drugs/biological functions (forming the acronym or aide memoir BASIC I.D.). Therapeutic techniques are applied systematically across the BASIC I.D. based on information derived from the client assessment, the therapist's clinical skills and empirical support.

The multimodal approach is underpinned by social learning theory (Bandura, 1977, 1986) general systems theory (Von Bertalanffy, 1968) and communications theory (Watzlawick et al, 1974). A revised multimodal-transactional model of stress that underpins multimodal stress management, therapy and coaching (Palmer, 1997a; adapted Palmer & Dryden, 1995) is illustrated in Figure 1 (Appendix 1).

2.2 Rational Emotive Behaviour Therapy (REBT), developed by Albert Ellis (Ellis et al, 1997) hypothesises that what we label 'stress' or 'distress' is largely determined not by the unpleasant events or stressors people experience in their lives, but mainly by their irrational (rigid, inflexible, illogical, unempirical, unhelpful) beliefs about what is happening to them. These beliefs primarily consist of dogmatic and absolutist demands and commands - shoulds, musts, have tos and got tos, which can lead to illogical conclusions such as: I'm worthless; It's awful; I can't stand it. The latter are also known as evaluative derivatives.

These core assumptions can be represented in the A-B-C framework that forms the cornerstone of REBT practice. It assumes that activating events and/or inferences about those events (A), engage evaluative beliefs (B), which in turn lead to emotional, physiological and behavioural consequences (C). In therapy, these evaluative beliefs are disputed vigorously (D) and, hopefully, replaced with more rational or helpful beliefs that lead to healthier emotions and constructive behaviours (E). In reality A, B and C interact in quite complex ways (Ellis, 1985).

3. Case Study

This case was chosen to demonstrate the complicated nature of chronic, work-related stress and its possible resolution at the level of the individual. The multimodal approach was used

primarily as an assessment tool. REBT provided the main instrument of change. The rationale for integrating these two approaches is that -

(a) the multimodal model provides a unique, systematic and pragmatic framework for the assessment of complicated cases.

(b) if, as the transactional theory of stress suggests, stress does not exist in the event but encompasses a set of cognitive, affective and coping variables, then *changing* appraising and coping become the focus of therapy - a key objective of an REBT approach.

There is considerable support for the integration of REBT and the multimodal approach (Ellis, 1997; Kwee & Ellis, 1997):

- 'REBT is not only multimodal in its techniques, but largely endorses Arnold Lazarus' (1989) technical eclecticism' (Ellis, 1997:54).
- Techniques used in multimodal therapy and REBT overlap for 65-80%.
- Both rely on empirical evidence before using a borrowed technique.
- REBT and multimodal therapy both integrate action, thought and feeling.
- The circular character of the modalities is recognised in both approaches.
- The BASIC I.D. and the A-B-C largely concur - REBT does not ignore biological/health issues (Ellis, 1976).

However, whilst REBT emphasises cognitive restructuring, multimodal therapy focuses on durable affective gains achieved through various, not exclusively, cognitive means.

In discussing this particular case, it is important to emphasise that we are talking about psychological 'distress,' since not all stress is distress. A degree of stress-related arousal, in some cases, can enhance performance or be viewed as exciting or pleasurable.

4. Presenting Problems

The client, Jane, was a 47-year-old staff nurse working full-time in a large general hospital. She had recently separated from her husband and lived with her young-adult daughter. Her young-adult son lived with his father. Jane referred herself to the Staff Counselling Service - part of the hospital's Occupational Health Unit - for help with stress-related problems. Her clinical manager advised her to attend for counselling because of her poor sickness record and apparent distress on the ward. She had attended 'Relate' during her marital break-up and was aligned to the idea of counselling as helpful.

Jane's presenting problems were exhaustion, tearfulness, fear of being unable to cope, and feeling out of control - the effects of long-term problems both at work and home. With over

fifteen years' experience in her specialty, Jane had been allowed to work autonomously, undertaking assessments and treatments without the necessary authority invested in her post. She had felt the growing burden of responsibility. With increasing staff shortages and patient demands, she felt workload pressures were intensifying. Her recommendations for change were ignored - '*nobody would listen.*' Her communication with the hospital consultants was described as '*confrontation rather than negotiation.*' She was feeling frustrated, angry, unsupported, isolated, and a nuisance both to management and the medical consultants. After a particular altercation with the latter she had walked out. Jane said that her husband had always been unsupportive of her work and had laughed when she described the dispute. *'This was the final straw!'* Jane described similarities between her relationship with her husband and the consultants - '*All these men talk down to me!*' and *'there are battles every step of the way!'* She decided to separate from her husband after 26 years of marriage and resign from her post.

The critical incident that precipitated her attendance in counselling was a management request to assist with a task-force reorganisation of her old department. The thought of returning to an environment where she had '*given her all and it had not been good enough!*' elicited great distress, anxiety and confusion about what to do.

A Multimodal Life History Inventory (MLHI) (Lazarus & Lazarus, 1991) allowed Jane to state in her own words the nature of her difficulties :

> *'It started from a culmination of problems with my marital relationship and work pressures, complicated by the serious illness of a close friend. A year after separating from my husband I felt very depressed and angry. I had made poor choices in life and 'missed out' on emotional support. Loneliness was a strong feeling. The thought of returning to a previously difficult work setting reinforced all my problems.'*

5. Initial Interview

In her introduction to the client, it was important for the workplace counsellor to define her role within the organisation and the boundaries of confidentiality. Failure in this area may destroy the credibility and reputation of a counselling service (Sugarman, 1992; Carroll, 1997). Once the client's concerns had been allayed and formal details completed, the aim of the first session was assessment and the development of a therapeutic alliance.

5.1 Importance of Assessment

A thorough multimodal assessment at the outset was essential to identify the full range of Jane's problems and determine specific treatment goals. An understanding of problem maintenance and factors contributing to client vulnerability e.g. values, belief systems, was required to enable informed clinical decisions and the prioritisation of treatment goals. A broad opening question - Tell me what is troubling you?- was asked. The therapist was alert to

dysfunction across Jane's BASIC I.D. Information gaps were completed with focused questioning about Jane's behaviour, affect, sensations, imagery, cognitions, interpersonal relationships and health issues. Additionally, the therapist was alert to signs of psychosis, organicity or suicide and the need for a judicious psychiatric or physician referral (A Lazarus, 1989).

5.2 Modality Profile

Writing down the salient features of Jane's BASIC I.D., together with information from her completed MLHI, facilitated the systematic identification of the client's stress-related problems. Possible interventions were recorded adjacent to each specific problem. The modality profile (Fig.7) served as a 'blueprint' for therapy. It was the link between assessment, the setting of clear objectives and the choice of specific therapeutic techniques for each particular problem. Jane's strengths and assets were also noted to give an understanding of her coping strategies and ability to withstand frustration e.g. hard-working, trustworthy, sense-of-humour.

Fig.7. Client's Modality Profile

Modality	Problem	Proposed Therapeutic Programme
Behaviour	Working too hard	Examine work ethic - *'I must put 100% effort into everything I do.'* Discuss pros and cons. Dispute self-defeating beliefs. Bibliotherapy.
	'Cry at the drop of a hat'	Feeling-identification.
	Sleep disturbance	Relaxation/self-hypnosis tape for bedtime use.
Affect	Exhausted	Examine work/shift patterns, workplace stressors. Lifestyle changes. Physician referral.
	'On an emotional roller coaster'	Teach REBT ABCDE paradigm. Self-monitoring. Diary.
	Depressed	Physician-supervised antidepressants.
	Angry & irritable	Anger management. Dispute irrational demands about others' behaviour.
	Scared of not coping	Coping strategies/imagery.
	Panic attacks	Anxiety management, breathing exercises. Cognitive cycle of panic.
Sensation	Tension headaches	Relaxation training, massage or biofeedback. Prescribed medication.
Imagery	Images of *'making things better for patients.'*	Explore meaning; discuss pros & cons.
	Images of not coping/losing control	Coping imagery dealing with difficult work situations
	Images of being alone	Rational-emotive imagery

Cognition	Muddled thinking Poor concentration *'I must prove to the world I can do better.'* *'I've made poor choices in my life.' 'I can't forgive dishonesty.' 'The managers should recognise my work.'* Values: social rights & justice. Loss of confidence	Self-monitor; focusing. Dispute self-defeating thinking; unrealistic expectations of self & others. Cognitive restructuring. Constructive self-talk; self-acceptance, assertiveness training; guided imagery. Bibliotherapy
Interpersonal	Passive/aggressive in relationships Independent & self-reliant Unsupported Not valued Not listened to Let down by team Conflict with consultants Lost trust in colleagues/ managers. Daughter jealous of Jane's new boyfriend Difficult relationship with step-mother Recently separated & emotionally disappointed in husband Illness of close friend Bereavement of father five years ago – loss of mentor & confidante	Assertiveness training Learn to ask for help Explore work culture; support/friendship networks, clinical supervision; stress map of workplace relationships; unrealistic expectations Anger management; communication skills: body language; dispute self-defeating thinking. Explore family systems; genogram; expectations; communications. Examine beliefs about manipulation & insincerity Explore unrealistic expectations & loss. Explore feelings and consequences Explore unresolved grief, bereavement counselling.
Drugs/ biology	Hypertension; mild asthma; rhinitis Little exercise Unhealthy diet – chips Consumes ten cups coffee/day	Physician-supervised medication Fitness programme – swimming Nutrition programme, reduce caffeine intake

5.3 Therapeutic Relationship

Matching therapeutic style with the requirements of the client was important to ensure a good therapeutic alliance. Information from Jane's MLHI aided the choice of interpersonal style and supported the choice of a multimodal approach integrated with REBT.

Jane's Aims of Therapy: '*Helping me to understand how I feel, and why I feel that way?*'
Length: *'8-10 sessions'*
Ideal Therapist: *'Be friendly, act as a non-judgmental guide in disclosure. Provoke challenge to enable insight and change.'*

6. Measures Before Therapy (see Appendix II, Fig.2)

Assessment information was obtained from a variety of sources. On the Maslach Burnout Inventory (Maslach et al, 1996), Jane scored 36 (very high) on emotional exhaustion, 12 (high) on depersonalisation, and 4 (high) on personal accomplishment. This indicated that she was feeling overextended and emotionally exhausted by her work, was experiencing negative feelings about her patients, and yet was still managing to obtain a sense of competence and personal achievement. On the General Health Questionnaire-28 (GHQ-28) (Goldberg & Hillier, 1979), Jane's score of 22 was much higher than a conservative threshold of 12/13 for psychological distress. Her scores were above average on the dimensions of somatic symptoms, anxiety, insomnia, and social dysfunction. The Brief Symptom Inventory (BSI) (Derogatis, 1993) provided information on the psychological distress associated with 53 possible symptoms, together with a profile of the overall psychopathological context in which notable symptoms occurred. Jane's measure of 71 for global psychological distress (Global Severity Index) was above the threshold for 'caseness.' Clinical levels of psychological distress were also evident for five of nine primary symptom dimensions: social alienation, depression, anxiety, hostility, and paranoid thinking.

6.1 Identifying Job-Related Sources Of Strain

Session two

Although the contemporary approach to understanding stress embraces a transactional viewpoint i.e. stress is in the eye of the beholder, it was also important to be aware of *potential environmental* stressors (Karasek, 1979). Using a pictorial model of organisational stress as a guideline (Palmer et al, 2001) (Appendix II, Fig.3), six potential sources of stress were identified, i.e. stressors intrinsic to the job, role stress, career development, workplace relationships, organisation structure/climate, and home/work interface. The Job Stress Survey (JSS) (Spielberger, 1994) revealed above-average levels of workplace stress (JSX 67, JPX 73) in terms of perceived severity and frequency. The JSS identified working overtime, dealing with crises, lack of recognition, insufficient personnel, making critical on-the-spot decisions, excessive paperwork, and covering work for other employees as major stressors.

Information from the overall assessment provided a working hypothesis that was shared with the client and modified as new information was obtained.

7. Hypothesis (Appendix III)

In line with Lazarus'[12] theory (1999), Jane's chronic stress appeared to arise from her 'struggle

[12] Refers to Richard Lazarus' transactional theory of stress outlined in Chapter 2 of the present research study.

to adapt to the pressures of life' and from stressful roles she strove to fulfil at work and home. In the past five years, she had experienced three significant life-events requiring considerable psychological/emotional adjustment: her father's death, her marital break-up, and children leaving home. In addition to environmental pressures, something about Jane as a person - her self-imposed demands - seemed to contribute to her dysfunction and distress. The main consequences of her inability to cope or adjust to these demands were exhaustion, sickness absence, anger, muddled thoughts, social withdrawal and a sense of failure as a nurse, wife and mother. Stress was manifesting as severe emotional/psychological distress, physical problems and impairment of social and occupational functioning. Jane's anxiety about her inability to cope and concern about her physical and mental health problems fed back in a vicious cycle to maintain the problems.

Work-related factors maintaining Jane's problems included: role ambiguity, responsibility without authority, organisational changes, lack of support, staff shortages, limited resources, professional hierarchies, and power structures. Other maintaining factors were Jane's troublesome relationship with her team '*the children!*' and conflict with the consultants.

According to Palmer (1995), it is the internal demands that an employee holds regarding the workplace that considerably increases their levels of occupational stress. Jane's altruistic assumptions - '*I need to make things better for the patients,*' her belief in '*fairness and justice*,' her need to be valued and recognised - *'I'm not good enough'* - drove her to work long hours, cover for staff, and strive for recognition through the prized goal of a G-Grade nursing post. Her independence and inability to ask for help and support also contributed to self-imposed pressures. At the home/work interface, personal demands to be '*the mother to my children that I didn't have*' competed with her need to succeed as a nurse. Other moderating variables were Jane's unresolved grief and loss of support as a consequence of her father's death and serious illness of her closest friend. The loss of her marriage and the 'empty nest' contributed to her sense of vulnerability and aloneness. Menopausal and gynaecological problems exacerbated her exhaustion and distress and reduced her coping resources.

The current crisis of dysfunction was elicited by a request from her manager to return to her previous ward where she had experienced conflict, lack of support and had not felt valued. Jane was flattered that her professional skills were valued enough to be asked to return but felt threatened by the consultants. She was afraid that she would be unable to cope, would become angry, distressed, and walk out again.

8. Therapeutic Aims

In workplace counselling, the ideal target for change is to eliminate or change the particular

environmental stressor perceived to be causing the client's problems e.g. increase NHS resources. This is rarely possible or realistic.

Palmer (1995, 1997a) states that how an individual reacts to a potential stress scenario is more due to her appraisal of it and her perceived abilities to cope or deal with it than the event or situation itself. The appraisal may be in a negative cognitive form or catastrophic image. The event can be considered a potential 'trigger' to activate the stress response but not necessarily the main cause of the activation. The main focus of therapeutic change thus becomes the identification of potential stressors, the moderation of the client's appraisal of difficult situations, and the improvement of her coping strategies/resources. This would enable Jane to achieve her therapeutic aims i.e. reduce her levels of stress and distress, alleviate her symptoms, and function in a healthier and more effective manner.

8.1 Treatment Goals

Two categories of treatment goals representing tangible targets for therapeutic change were identified during Jane's assessment and guided the content of treatment:

1. General outcome goals collaboratively generated between client and therapist e.g. eliminate panic attacks, improve coping skills.
2. Process-linked goals derived from a conceptualisation of factors maintaining her problems e.g. modify faulty appraising/irrational beliefs, strengthen new beliefs.

Some specific process-linked REBT goals were to demonstrate to Jane that:

- The environmental pressures she was experiencing did not by themselves cause her distress, although they might be contributing to it.
- Her psychological distress was arising from her irrational (unhelpful) interpretation of events and internal demands.
- Modifying her rigid beliefs and internal demands such as *'I must put 110% into everything I do'* with more rational philosophies, would help produce a more elegant form of stress management, encourage healthier emotions and constructive behaviours.

9. Prioritising Problems & Technique Selection

A broad range of interventions was required to deal with the complexities of Jane's stress problems and meet her desired goals. The selection of specific techniques was based on empirical evidence of their effectiveness and followed a logical sequence across the range of modalities of Jane's BASIC I.D. Prioritising the problems and evaluating the risks and benefits of possible interventions in collaboration with Jane ensured that she understood the rationale for each intervention and took ownership of the programme. Her most pressing needs causing

most distress received priority. Problems that could be assigned to her GP (investigating possible menopausal and physical components of her exhaustion), dealt with as between-session assignments, or presented greatest benefits with least risk, were dealt with early on.

Techniques and interventions were chosen to encourage changes at the level of the individual, the organisation, the interpersonal, and the home/work interface, including: changes in Jane's self-awareness, behaviour, emotions, thinking, interpersonal relationships, coping strategies, self-efficacy, and support. A stress-map analysis (Palmer, 1990), assertiveness, and communication skills training were proposed for Jane's interpersonal difficulties; relaxation training and exercise to relieve tension; cognitive restructuring and REBT for behavioural and emotional stabilisation; coping imagery and anxiety management to facilitate return to work; and bereavement counselling. A psycho-educational approach to the physiology of stress and anger was also included, alongside self-help books (Hauck, 1985; Fontana, 1994; Chambers et al, 1999; Burns, 2000; Palmer et al, 2003) to enhance the treatment process and content.

10. Initial Therapeutic Plan

- Assessment to determine range and complexity of stress problems.
- Completion of Multimodal Life History Inventory; psychometric assessments.
- Referral to GP.
- Identification of potential workplace/environmental causes of strain.
- Hypothesis and formulation of problems.
- Prioritisation of treatment goals.
- Selection of possible interventions at different levels: individual, workplace, work/home interface.
- Encouragement of self-help e.g. bibliotherapy, exercise, nutrition etc.
- Deal with immediate crisis that brought Jane into therapy - decision to return to 'feared' work environment.
- Psycho-education: physiology of stress, anger management.
- Identify workplace support; liase with client's manager.
- Teach REBT, ABCDE paradigm and diary.
- Recommend assertiveness training course.
- Work through interventions tackling specific problems.
- Interpersonal relationships.
- Bereavement issues.
- Ongoing assessment/hypothesis revision.
- Review.
- Termination.

11. Development Of Therapy

Jane attended stress counselling on a weekly basis following her initial assessment. An early explanation of the psycho-physiology of stress ensured that shed had confidence in the goals of the therapeutic programme. A typical cognitive therapy format (Palmer, 1992) provided a useful structure, maximising the session-time available and maintained a collaborative enterprise. The format used was:

- Review client's present state
- Set agenda
- Review between-session assignment
- Target problem
- Negotiate between-session assignment
- Session feedback

On occasions it was more appropriate to respond to the immediate problems presented by Jane. Some key content issues of the therapeutic process are considered below.

11.1 Session Three

The most pressing problem was Jane's return to work and a problem-solving cost/benefits approach was used to aid this decision-making process. Employment options were considered. Jane decided to return provided she was not given full responsibility for the ward, had regular support from her clinical manager, and had confirmation that a task-force review would be implemented (to increase staffing). Coping imagery was used to facilitate her return (Meichenbaum, 1977). This required Jane to picture herself coping adequately in a feared situation on the ward. Jacobson relaxation and breathing exercises were taught to relieve tension headaches and aid relaxation (Palmer & Dryden, 1995). A structured return/rehabilitation programme was negotiated with her manager to ease her return. Jane informed him that she was undergoing counselling.

11.2 Session Four

Findings from Jane's Job Stress Survey (Spielberger, 1994) were considered and areas in the workplace identified for realistic change. Prescriptive advice was given for her to take regular leave and breaks, and to avoid working over contracted hours. When experiencing work overload and staff shortages, she was to communicate quickly and effectively with her manager, alert him to the problems, and obtain locum help rather than cover the situation herself. To help cope with crisis situations, Jane was taught the REBT model and asked to keep a diary of stressful situations, monitoring her thoughts, feelings and behaviours. To ease her self-imposed demands, her unhelpful, irrational beliefs that *'I must be the perfect nurse'* were

challenged and modified to more realistic expectations *'I would strongly prefer to perform well most of the time but this may not be possible with the resources/staff available.' 'If I do not perform at 110%, I can still view myself as a good nurse.'*

11.3 Session Five

Christmas arrived and Jane wanted to talk about the sudden death of her father on New Year's Eve, five year's ago. He was her lifelong mentor and support and she missed him a great deal. The gestalt 'empty chair technique' was used to work through her thoughts and feelings towards her father and say goodbye. Jane realised she felt angry: *'Why aren't you here for me now!?'* and was achievement-driven, like her father.

11.4 Session Six

Jane discussed a recent rift with her stepmother. She acknowledged her sadness associated with the core belief of *'Nobody wants me!'* - a pattern she identified from childhood relationships with both her mother and stepmother. A connection was made to her general desire to *'be wanted'* by her manager, her team, the consultants and the organisation. If this demand was not met, her usual angry response was *'If you don't need me, I don't need you!!'*

11.5 Session Seven

As relaxation techniques to help ease Jane's tension headaches were having little effect, a second-order BASIC I.D. (Fig. 8) was used to subject this item to a more detailed enquiry across the different modalities. The investigation suggested that 'anger' was a supporting factor of the headaches and a significant component of her stress process. This allowed us to follow more productive therapeutic avenues, particularly the use of REBT to dispute Jane's anger-creating demands.

A specific episode in which Jane had clashed with the consultants was chosen to utilise an REBT approach to anger management. Suitable anger management bibliotherapy (Hauck, 1985) and an assertiveness course were negotiated. Between-session assignments of rational emotive imagery were used to challenge Jane's unhelpful expectations/beliefs about the consultants' behaviour. Jane had to close her eyes, imagine a consultant acting in a way that put her down or was dismissive of her requests, and repeated her irrational beliefs: *'He still doesn't see me as part of the team. He should know me better!'* When she felt angry, Jane was to visualise her body-language being more assertive and change her demands to preferences: *'I would strongly prefer him to respect me as a professional and do what I ask, however, if he says no, that's not too bad. He's just a fallible human being like the rest of us.'*

Fig. 8. Second-Order BASIC I.D.

Modality	Problem	Proposed Intervention
Behaviour	Masking anger Abrupt speech, sharp tone Busyness *'Let off steam'*	Bibliotherapy Communication skills Assessment of Type A characteristics
Affect	*'Prickly,'* Irritable Low frustration tolerance; hurt	Anger management; feeling identification
Sensation	Tense shoulders, headaches	Psycho-education: physiology of anger. Relaxation exercises
Imagery	Images-of-self as hostile to consultants/staff	Coping imagery - staying calm & assertive in interactions
Cognitions	Angry at organisation/management: *'If you don't need me: I don't need you!'* *'It's not fair, all my wasted changes!'* Angry at team: *'They let me down! Behave like delinquents!'* Angry at consultants: *'No matter how much I put in, it's not good enough!'* Angry at husband: *'I wasn't allowed to be me. I wanted security, not oppression!'* Angry at stepmother: *'I trusted her and she manipulated dad against me!'* Angry at father: *'Why aren't you here for me now!'* Angry at herself: *'I should have done better!'*	Identify expectations. Dispute demanding, self-defeating, irrational beliefs. Cognitive restructuring.
Interpersonal	Withdrawing from supportive relationships Passive-aggressive with staff Short-tempered with daughter	Discuss pros and cons of withdrawal. Stress map & REBT interventions with difficult relationships; assertiveness training; rehearsal; role-play.
Drugs/Biology	Hypertension. Resort to a glass of wine.	Prescribed medication. Swimming

11.6 Sessions Eight/Nine

Workplace Relationships

Jane felt particularly angry with her colleagues '*regurgitating*' her ideas during a team-building day. This reinforced her beliefs that *'nobody'* had listened to her previous recommendations and that she was not valued. She described them as '*delinquents*' and '*children playing up.*' These interpersonal difficulties were explored in greater detail using a 'stress map' (Palmer, 1990), a visual technique for investigating work, social and family conflict from the client's perspective. By asking Jane to quantify (on a scale of 0-10 where 10 is very stressful) the level of stress triggered by other members of her team, those relationships perceived as primary sources of stress were pinpointed. This helped prioritise the problems and determine where interventions could be made. Jane's irrational or negative beliefs about each relationship were

noted and targeted for REBT disputing. Jane's values of fairness, honesty and altruism and anger-at-self if she failed to meet her own exceptions were discussed, and her irrational demands on her team if they, too, did not live up to her expectations were challenged.

11.7 Sessions Ten/Eleven

A 'tracking' technique was used to aid the selection of appropriate interventions for Jane's panic attacks. The aim was to establish the particular sequence or 'firing order' of modalities experienced by the client during a particularly distressing event (Lazarus, 1989). Interventions were then linked to the firing order of the modalities to ensure a quick reduction of the stress response. Jane's panic-attack diary revealed:

> *'I start off with a sense of being trapped on the ward, like claustrophobia -when I got stuck in a sandbin as a child. I realise I'm on my own again! I've no support! It's all my responsibility! I've got to make all the decisions! I start to feel panic, my mouth gets dry and I can't swallow. My pulse rate goes up and I feel really hot. I want to run out but can only go and hide away in my room, away from people. Something must be really wrong with me!'*

She consciously avoided being the only manager on the ward. An imagery-cognition-sensation-image-behaviour-cognition 'firing-order' was identified and interventions were matched in I-C-S-I-B-C sequence (see Fig. 9).

Fig.9.

Firing Order	Modality	Treatment Selection
1	Imagery: Self-image of child shut in the sandbin. Image of being alone on the ward	Coping imagery of adult-self coping reasonably well on the ward *'I am an adult'*
2	Cognition: *'I'm on my own again. It's all my responsibility!'*	Inference chaining (REBT) to determine self-defeating thinking. Explore meaning of 'responsibility'
3	Sensation: dry mouth, hot sweats, pulse increases	Breathing relaxation exercise. Benson relaxation response
4	Image of self escaping	Coping imagery
5	Behaviour: withdrawal	Self-monitor
6	Cognitions feed back into panic dysfunction	Demonstrate how negative thoughts feed back into vicious cycle of panic

Coping imagery was used to help Jane view the problem from an adult perspective. An REBT strategy, inference chaining, was used to elicit the client's increasingly distorted inferences and their implicit demands in the build up of panic (Dryden, 1989). The therapist asked *'Let us assume that you were on your own, what would be anxiety-provoking about that?'* and repeatedly questioned the subsequent responses using *'Let's assume that ..... was true, then what ?'* in a similar manner to reveal the relevant inferences and unhelpful beliefs.

"I'm on my own again.
⇩
It's all my responsibility.
⇩
I've got to make all the decisions.
⇩
There's nobody to help me.
⇩
I won't be able to cope (Critical 'A')
⇩
I'll lose my job!"
⇩
Emotional Consequence: Panic

Evaluative Belief: *'I'm a failure'*

Assumption: *If I don't cope on the ward on my own, other people (and myself) will think I'm a failure.*

Hypothesised rule or demand: *I must cope at all times.*

The therapist noted the client's most clinically relevant inference (critical A), which triggered the underlying stress-inducing belief *'I'm a failure.'* (The inference chain is similar but different to the downward arrow technique often used in cognitive therapy, although in this example the outcome has been expressed in both forms to aid understanding) This belief was challenged to help develop acceptance of fallibility, increase self-acceptance and self-confidence. Jane suggested a self-coping statement *'I really want to make this work, however, it's not my individual responsibility. If it doesn't work, it doesn't mean I've failed.'* In order to avoid defining herself as incompetent or worthless, she was encouraged not to give herself the single global rating *'I'm a failure'* but to accept herself as fallible, complex, ever-changing human being (Ellis et al, 1997).

11.8 Sessions Twelve/Thirteen

Further stress-inducing unhelpful beliefs about the workplace were elicited, challenged and modified: *'The organisation must treat me fairly at all times!'; 'The management should appreciate my work!'; 'I should get my promotion, otherwise I'm no good and not wanted!'* More helpful preference statements were developed e.g. '*There is no evidence that I will get what I demand, even if it is preferable.'*

11.9 Session Fourteen - Review

A review of Jane's progress with reference to her original problem-list was carried out. Feedback was obtained on previous counselling sessions. Outstanding problems regarding family relationships were noted.

11.10 Session Fifteen – Relapse

Jane was distraught that her post was to go before a 'vacancy review panel' and that she had to apply for her own job - '*I'm not a person, just a job!*' She did not trust the organisation to give her promotion, felt rejected and was prepared to walk out again *'If they don't need me, I don't need them!'* However, she had been head-hunted by a nearby hospital and so, once again, we considered the pros and cons of her leaving. Jane concluded that leaving would be a backward step and decided to cope with her feelings of insecurity and uncertainty.

11.11 Further Sessions

Jane was offered a G-grade nursing post! In the final four sessions, outstanding problems from the modality profile and Job Stress Survey were considered, including: changes in her work environment e.g. no longer tolerating a cupboard as an office; increasing participation in decision-making; and improving communication with her manager. Jane developed a friendship network, and dealt with her daughter's objections to her new social life and partner. The final session was scheduled for one month later.

11.12 Conclusion Of Therapy

Jane's progress was re-examined. Positive changes had been made to reduce both internal and external pressures and her perception of demands from the organisation, her team, and family. She had moderated her perfectionist beliefs to a more realistic 'striving for excellence.' Significant changes were evident in her self-awareness, self-acceptance, self-confidence, behaviour, thinking, and physical and emotional well-being. She had made some lifestyle changes, improved her coping strategies and developed a friendship/support network.

Jane's relationships with the consultants had improved and she felt valued - they had acknowledged her expertise and opinion as a fellow clinician. She was able to cope with the responsibility of the ward and was to undergo some formal management training. She was taking regular leave and allocating herself a whole day for management tasks. Her daughter was more accepting of her new social life. Her medical tests were clear, she was eating a healthier diet, taking regular exercise, feeling more energetic and enjoying life. Although Jane was planning her work more effectively, she had not yet achieved a balance between work and homelife - frequently working two hours over contracted time.

12. Questionnaire Outcome Measures

As shown in Figure 2, Appendix II, on the Brief Symptom Inventory, the number of symptoms reported by Jane had reduced from 35 to 13. Her Global Severity Index (54) had fallen below the level of clinical 'caseness.' Symptoms of 'trouble remembering,' 'checking,' and 'difficulty

making decisions' remained in the clinical range, causing moderate distress. Her GHQ-28 score (0) had also fallen below the 'caseness' level. On the Maslach Burnout Inventory, her 'emotional exhaustion' scores (26) were down to moderate levels. 'Depersonalisation' scores (3) had also decreased, indicating an improved nurse-patient relationship. Although her scores (JSX 58) on the Job Stress Survey had reduced, Jane's perceptions of stressor severity and pressure were still above average (JPX 64). However, she appeared to be coping with these pressures as indicated by her symptom reduction. High scores remained on job-stressor items 'insufficient personal time' and 'insufficient personnel,' which were outside her control.

Although the use of outcome measures, observable goals, and BASIC I.D. was a useful benchmark against which therapeutic progress could be measured, it was also important to use clinical judgement of client readiness to end the therapeutic process. Overall, it was evident that the initial problems or symptoms of stress that had motivated the client to seek counselling had decreased in number and intensity. A final follow-up session was agreed for three months hence to ascertain Jane's ability to transfer the learning to other situations and whether she was coping with the pressures of her new job.

12. Follow-up

The strategies across the entire BASIC I.D. to cope with anticipated problems were reviewed. Improvements in psycho-physiological well-being were re-examined. Jane reported feeling confident to live effectively without counselling. There was closure of any affective and relationship issues that had arisen between the therapist and client. It was agreed that Jane could contact the therapist again if she became distressed and was unable to deal with problems, after first attempting to solve them herself.

13. Therapeutic Difficulties

The counsellor was aware of a tendency to lose focus on the main target issues and succumb to 'therapeutic drift' i.e. she approached each session with a plan that was frequently adapted to the immediate demands of the client. Being led by client needs also meant being flexible enough to switch from a work to a home/relationship focus, or to a past or future orientation. The client had (unrealistically) expected to attend for 8-10 sessions but, because of the complexity, the therapy had taken much longer. Managing time boundaries was difficult as there was so much to cover during each session. In addition, when working with the client on the pros and cons of leaving her job and working over contracted hours, the counsellor was faced with a classic difficulty of workplace counselling: Who is the client, the individual or the organisation? (Shea & Bond, 1997). Boundaries of confidentiality were challenged when Jane's manager telephoned the therapist to discuss Jane's 'clinical depression' when she had gone

home in a distressed state. The client/counsellor contract of confidentiality was explained.

14. Learning From The Psychotherapeutic Practice

The main learning for the counsellor was the importance of modifying Jane's unique, individual, internal pressures (*her cognitions*) as a proactive stress management strategy, enabling the client to keep her problems in perspective and reduce the demands on herself. The case also highlighted the intensity of the emotional component of the stress process and supported Lazarus' (1999) argument for 'emotions' to be given greater prominence in a theory of stress. Although Jane was distressed and tearful, the importance of anger in her stress process had not been immediately obvious. The completion of an anger inventory may have helped. Supervision and the second order BASIC I.D. were useful for identifying the sources of her anger. Supervision also helped to identify personal issues for the therapist that were stimulated through her identification with the client e.g. the need to have and use good workplace support.

It was essential to maintain a focus on the main target issues whilst being flexible around the order in which problems were dealt with. The separation of stress-related problems across the BASIC I.D. was useful for identifying specific issues, patterns, connections and processes. In workplace counselling, an awareness of organisational systems and different levels of possible therapeutic interventions was important i.e. at the organisational or departmental level, and at the home/work interface. The selection and implementation of numerous techniques highlighted the need for flexibility, adequate skills, training and confidence of the therapist, and the establishment of a strong therapeutic alliance. Self-help books were useful in time-limited therapy to aid recovery and help the client understand the causes and subsequent management of her emotional distress (Burns, 1989).

15. Conclusion

Through the creative combination of a multimodal assessment and REBT procedures, the therapist attempted to provide a framework that was comprehensive, highly personalised and able to address the heterogeneous presentations of a client suffering from chronic stress problems. The multimodal approach provided a thorough, systematic framework for assessment and the identification of specific treatment goals and techniques. Integrated with the REBT approach, this offered a broad range of possible interventions to deal with the dysfunctional cognitive, affective, and behavioural variables of the client's stress process, thereby moderating her appraisal of difficult situations and improving her coping skills/resources. Overall, the therapy appeared to help the client make herself significantly 'less disturbed' and, hopefully, after termination of therapy, distinctly 'less disturbable' in line with Ellis' (1997) notion of

elegant change.

Multimodal therapy endorses a systematic eclecticism, the orderly selection of techniques borrowed from diverse orientations without adopting the theories behind them. REBT is multimodal but is theoretically eclectic in that techniques borrowed from other therapies are used consistent with REBT theory and principles. The therapist's rationale for using REBT alongside a multimodal assessment is supported by Dryden's (1995) observation that whatever techniques the counsellor employs, the client will *think about* the treatments, i.e. most techniques involve the use of highly cognitive processes.

Eclectic therapies have been robustly challenged as 'multi-muddle therapy' (Owen, 1996) in which therapists select and apply techniques at random. Wells (1997:265) argues that 'The use of hybrid treatments combining unmodified cognitive and behavioural techniques are beset by problems of theoretical integrity and in their extreme form offer little more than a shotgun technique-based approach to treatment.' In its defence, the multimodal approach argues that its procedures are logical, deliberate, pragmatic and systematic. It uses techniques supported by empirical evidence and rests on an empirically-sound bedrock of cognitive and social learning theory. The approach is not to be confused with simple eclecticism that occurs in a haphazard, unsystematic way. It agrees with London (1964:33) who stated: 'However interesting, plausible and appealing a theory may be, it is techniques not theories that are actually used on people. Study of the effects of psychotherapy therefore is always the study of the effectiveness of techniques.'

Multimodal therapists select from techniques that have proven to be empirically effective for specific individuals with specific problems in line with Paul's (1967:111) mandate: '*What* treatment, by *whom*, is most effective for *this* individual with *that* specific problem and under *which* set of circumstances?' Wherever possible, an assiduous attempt is made to match the techniques and the therapeutic relationship of choice with the needs of the client. The limitations of a multimodal orientation most likely rest on the skills and flexibility of the therapist (Palmer, 1997b). It is worth noting that the application of another approach such as REBT within multimodal therapy is still consistent with multimodal therapy as the therapist will match the most appropriate interventions with the client concerned.

Section D: Antarctica -

A Review Of Stress, Coping And Positive Adjustment To The Challenges Of Working On The *I.C.E.* (Isolated And Confined Environment)[14]

Volume I

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Section D: Antarctica - A Review Of Stress, Coping And Positive Adjustment To The Challenges Of Working On The *I.C.E.* (Isolated And Confined Environment)

1. Introduction

Antarctica is the ultimate icy wilderness. The polar literature unanimously describes Antarctica in terms of superlatives and harsh natural beauty. Antarctica is a unique environment – remote and hostile, with no indigenous population. It enjoys the reputation of being the highest, coldest, driest and windiest continent on earth, where temperatures have dropped as low as nearly –90°C and wind speeds reach in excess of 100 mph. With low snowfall, inland Antarctica is technically a desert. Less than 0.6% of the continent is ice-free. The surrounding oceans provide a virtually impenetrable barrier of sea ice, which in winter covers an area one and a half times the size of the continent (Cornelius, 1991; British Antarctic Survey (BAS), 2002).

For the early explorers Antarctica was the ultimate survival contest. The contemporary picture of Antarctic human experience is one of physical and social challenge with great potential for life enhancement and personal discovery.

Psychological studies of Antarctic sojourners have been systematically investigated since the International Geophysical Year (IGY) of 1957-58 (Barabasz, 1991). The present review considers key studies of psychological adaptation and adjustment to the isolated and confined environments of Antarctica and relates the findings to the constructs of the stress paradigm. In this context, stress is conceptualised as a dynamic adaptive process as individuals struggle to cope with, and adjust to, a novel and potentially hazardous physical environment and the unique micro-cultures of Antarctic research stations. Understanding the human experience in Antarctica from the perspective of an adaptation paradigm may further our knowledge of the relationship between stress, coping and health, and the role of personality, situational and socio-cultural moderators in this relationship. In particular, the review seeks to highlight Antarctic research as a rich source of studies of groups, leadership, salutogenic (Antonovsky, 1979) and positive aspects of stress. It is also hoped to bring the long history of research into human adaptation in Antarctica to the attention of researchers of mainstream stress and coping.

Several reviews and summary texts of the psychological aspects of the human experience in Antarctica have been undertaken. Many of the authors have lived and worked there and can personally vouch for the phenomena described. These include: Mullin (1960); Wilson (1965); Edholm & Gunderson (1973); Gunderson, (1974); Macpherson, (1977); Chipman (1986); Harrison, Clearwater and McKay, 1991; Palinkas, (1989, 1991a, 1992); Palinkas, Suedfeld, Glogower & Dembert (1995); Taylor (1987, 1998); Rothblum (1990; 1998).

The focus in Antarctic psychological research has moved from the study of pathogenesis and

psychological ill health to the study of Salutogenesis, individual differences, and resistance resources that enable people to cope with the stressors of isolation and confinement and stay healthy. Attention has also been given to psychosocial and cultural aspects of small group adaptation, and the refinement of selection procedures through personality studies and performance measures. Antarctic studies have long been regarded as useful analogs of long duration space missions and other isolated and confined environments (Shurley, 1973; Harrison et al, 1991; Suedfeld & Weiss, 2000; Stuster, 1996; Sandal, 2000; Stuster et al, 2000; Palinkas et al, 2000ab).

2. Stressors

The sociocultural systems of Antarctic research stations exist in the most remote and severe natural environment on earth (Palinkas, 1989). Although research stations are designed to provide protection from the harsh environment, reasonable physical comfort, and facilities for year-round maintenance, the human experience in Antarctica is characterised by stressors of prolonged isolation, confinement and exposure to extreme environmental conditions – *I.C.E.* (Palinkas, 2000). The outside climate is cold, threatening and potentially lethal. Residents of research stations must contend with high altitudes (at the South Pole), extreme light/dark cycles, very low humidity, exposure to extreme outdoor working conditions, and the potential for dehydration. Survival and communication are contingent on advanced technology and active transport of supplies (Palinkas et al, 1995b).

Because of these characteristics, polar conditions are axiomatically assumed to be extreme, unusual, hazardous and potentially stressful (Gunderson, 1973; Rivolier et al, 1988; Taylor, 1987). Surprisingly, this very harsh and potentially hazardous environment does not seem to represent the most serious difficulty to human adaptation in Antarctic research stations. Under current conditions of polar work, Mocellin et al (1991) argue that the major physical stressors remaining are probably the absence of sunlight and restricted mobility and exercise, and that the physical deprivations and dangers of Antarctic living are remarkably well-tolerated by most people. Several authors (Lantis, 1963; Law, 1960; Levesque, 1991; Palinkas, 1986; Palinkas & Browner, 1995; Peri et al, 2000b) emphasise the greater influence of psychological and socio-cultural stressors that impact on individual and group adjustment processes. Winter-over crews report that isolation and confinement are more difficult to live with than the severe environmental conditions.

Thus, most of the specific problems that the explorer Admiral Byrd experienced in the 1920s have been eliminated by modern technologies. However, Stuster (1996:37) argues that much about Byrd's experience of the ***psycho-physiological*** demands of Antarctica is still relevant and instructive to the planners of today's remote duty missions:

> *In all aspects, particularly the psychological, the risks surrounding the project were very real. Whosoever should elect to inhabit such a spot must reconcile themselves to enduring the bitterest temperatures in nature, a long night as black as that on the dark side of the moon, and an isolation which no power on earth could lift... now against the cold, the explorer has simple but ample defences. Against the accidents, which are the most serious risks of isolation, he has inbred resourcefulness and ingenuity. But against darkness nothing much but his own dignity..... The day would be the repeated pattern of the hour, the week, the repeated pattern of the day; and one would scarcely be distinguishable from the other, even as an interval in time. Where there is no growth or change outside, men are driven deeper and deeper inside themselves for materials of replenishment. And on these hidden levels of self-replenishment ..... would depend the ability of any group of men to outlast such an ordeal and to come to hate each other.*
>
> - Richard E Byrd, 'Alone.'

Admiral Byrd is said to have taken along, in addition to two coffins, an even dozen strait jackets (Mullin, 1960:323). This pessimistic precaution turned out to have been unnecessary but does suggest the respect that even experienced explorers had for the psychological vicissitudes of isolated polar living. Commander Mullin's review identified three basic stressors to which members of Antarctic wintering parties must adjust: **the isolated group; the sameness of the environment; and the absence of customary sources of satisfaction and gratification**.

Gunderson and Nelson (1964) identified six stressful attributes of Antarctic small station duty: 1.) Confined isolation: geographical, social and emotional remoteness, with limited space and opportunity to withdraw or escape from the station. 2.) Continuous proximity of same associates: lack of interpersonal choice, knowing one must get along with others. 3.) Tension control: necessity of controlling aggressive and emotional impulses; inability to relieve anxiety; lack of heterosexual object. 4.) Boredom, monotony: sameness of physical surroundings, faces, tasks, conversations, lack of stimulus variety. 5.) Physical hardships: hard and heavy work, cold, darkness, certain food deprivations, working hard to attain minimal standards of health and safety. 6.) Status limitations and levelling: role overlap, lack of immediate status rewards. The ranking of stressors in order of difficulty was: handling interpersonal conflict, relating to subordinates, separation from usual supports, relating to peers, coping with aggressive impulses, sexual adjustment, relating to superiors, and task effectiveness.

Taylor's (1998) review of psychological adaptation to the polar environment supports these earlier findings indicating that the ***interpersonal stressors*** of isolation and insulation from the outside world are much the same today for groups that winter-over as they have always been.

However, Mocellin and Suedfeld (1991) argue that the majority of today's Antarctic visitors never encounter the full force of the unpleasant side of polar climates and terrains. Most personnel arrive well after the start of the polar spring and leave before the end of the polar autumn. The experience of this summer period for Antarctic expeditions is quite different from winter in a number of ways (Misischia, 1991; Peri et al, 2000a) especially with respect to

continuous daylight. Most summer personnel live in fairly safe, well-constructed, permanent or semi-permanent buildings or in small research camps in well-designed tents. Food, fuel and other necessities are replenished without too much difficulty, and rescue/medical help is almost always available. General pressures are characterised by human hyperactivity from heavy workloads, time pressures taking advantage of favourable summer weather conditions, frequent social changes from personnel rotations and visits by tourists and scientists. Psychological casualties have never been reported and the socioemotional climate has always been appraised by medical officers as satisfactory (Peri et al, 2000a).

In brief, the perceived threat of harm from the Antarctic natural environment has become less acute.

3. Strain: Consequences of Antarctic Living

Although modern day scientists and support personnel do not have to endure the hardships and deprivations of early Antarctic explorers such as Scott and Shackleton (a source of considerable disappointment and disillusionment for some), the combination of prolonged isolation, confinement and extreme physical environment continues to produce a number of physiological and psychological changes, especially in winter-over personnel (Palinkas, 1995; Palinkas et al, 1997; Bhargava et al, 2000; Palinkas & Houseal, 2000; Lugg & Sullivan, 2001). In a review by Olsen (2002), physiological changes include dyspnoea, arterial hypoxia, headaches, hypocapnia, hyperventilation, (Aidaraliev et al, 1987; Moyer, 1976; Bodey, 1974; Guenter et al, 1970), suppression of the immune system (Muller, 1995; Tingate et al, 1997; Thom & Lugg, 2002), hyperthyroidism (Reed et al, 1990, 2001) a complete absence of Stage IV sleep as well as sizeable reductions in the amount of Stage II and REM sleep (Palinkas et al, 2000c).

There is evidence of increased suggestibility, hypnotisability, imperviousness to distracting events, and increased ability to engage in imaginative involvement in Antarctic personnel, which may persist for some time after winter-over (M Barabasz, 1991). Two common behaviours reported during Antarctic winters are 'big eye' - staring with unfocused eyes, and drifting – detachment and apathy (Popkin et al, 1974; Owen & Arendt, 1992). These may be coping strategies but also raise concerns regarding safety issues and failure to complete assignments. Lacking normal circadian cues of daylight and darkness, some people's behaviour may become desynchronised affecting their physiology, interpersonal relationships and morale (Stuster, 1996; Yoneyama et al, 1999). Whether insomnia, altered states of consciousness, and lowered arousal (Nantani, 1991; Farrace et al, 1999) are due to physiological or psychological factors, or a combination of the two is unclear.

Today, general injuries form the majority of Antarctic medical problems for the British Antarctic Survey team (Olsen, 2002). Contrary to popular opinion, cold injuries are relatively rare owing to increases in health and safety awareness and advances in clothing technology

(Cattermole, 1999a). However, cold can be a contributory factor in accident and injury causation (Taylor, 1984; Rivolier et al, 1988; DeFreitas & Symon, 1987) and a disproportionate number of injuries are attributable to recreational activities such as skiing. (Cattermole, 1999b). Selecting personnel with risk-taking tendencies for Antarctic duties could be disastrous (Klen, 1992).

3.1 Psychological Effects

Early researchers considered the stressors of isolation and confinement to have potentially devastating effects on the mental health of some individuals wintering-over in Antarctica (Mullin, 1960, Edholm & Gunderson, 1973). However, reported cases of psychoses or severe neuroses have been extremely rare although the few cases that have occurred were serious in nature (Gunderson, 1968; Matusov, 1968; Strange & Klein, 1973; Lugg, 1977; Stuster, 1996). Rivolier and Bachelard (1988) found 12% of French Antarctic personnel exhibited various forms of inadaption to the conditions but only 1% of personnel were diagnosed as having actual psychiatric disorders. Information on severe mental health problems is sparse and it remains unclear whether isolated and confined environments really cause a disproportionate incidence of psychological problems and aberrant behaviours (Palinkas & Browner, 1995) or whether the effects are 'normal' adaptive responses to this environment (Palinkas, 1989; 1992).

3.2 Winter-Over Syndrome

A cluster of symptoms known as 'winter-over syndrome' (Strange & Klein, 1973) has been almost universally reported by investigators (Mullin, 1960; Gunderson, 1963a, 1966a; Doll & Gunderson, 1971; Taylor, 1987; Palinkas, 1989; Palinkas et al, 1995a). Although technically not a clinical construct, the syndrome is characterised by varying degrees of depression, irritability and hostility, insomnia, and cognitive impairment, including difficulty in concentration and memory (Palmai, 1963; Strange & Youngman, 1971). Further research (Reed et al, 2001) has linked some alterations in mood and cognition with hormonal changes. Improvements in living conditions have not significantly reduced winter-over symptoms (Gunderson & Palinkas, 1991). Most investigators report that winter-over symptoms are relatively mild (Blair, 1991), and that the stress of isolated duty does not produce psychiatric disorder in otherwise healthy people (Nelson, 1965; Strange & Youngman, 1971).

3.3 Seasonal Affective Disorder And Cognitive Performance

Current accounts of the aetiology of Seasonal Affective Disorder (SAD) (Rosenthal et al, 1984) claim that reduction in daylight triggers mood disorders and impaired social and affective functioning in some people. Palinkas, Houseal and Rosenthal (1996) found that, while the rates of clinical depression and SAD amongst Antarctic winter-over staff are low, subsyndromal symptoms of SAD increase in winter and with increased latitude. Brennen (2001) argues that

changes in physical environment have a small and limited effect on mental performance. Testing cognitive performance at 69°N, Brennen found few seasonal effects and most were, contrary to expectation, winter advantages. Taylor and Duncum (1987) found no objective differences in performance on a mental imagery task in Antarctica, despite participants' beliefs that they were performing worse in winter.

3.4 Third-Quarter Phenomenon

Several studies provide evidence of a 'third-quarter phenomenon' in which a decrease in mood and performance is likely to be observed in the third quarter of the mission regardless of mission length or severity of the physical environment (Bechtel & Berning, 1991; Steel & Suedfeld, 1992; Harrison et al, 1991; Stuster et al, 2000; Palinkas et al, 2000a; Sandal, 2000). However, empirical support for the third quarter phenomenon is not clear-cut. Steel's (2001) study of polar moods offers moderate support. Palinkas and Houseal (2000) found scores for anxiety, depression, anger, confusion, fatigue and vigour in winter-over personnel improved up to and beyond the winter solstice before getting worse in spring. Ikegawa et al (1998) found no pathological depression in midwinter for a Japanese winter-over group. Sasaki et al (1980) and Evans et al (1987) found linear increases in anxiety and hostility and no significant trend in depression in winter-over personnel. Mocellin & Suedfeld's (1991) diary studies of UK early polar expeditions found, surprisingly, that midwinter was the least stressful period. Steel & Suedfeld (1992) found no evidence of temporally-based variation in mood in an isolated group of scientists over an Antarctic summer.

3.5 Anxiety

Findings of anxiety studies in Antarctica are also inconsistent. Mocellin et al, (1991) and Suedfeld (1998) argue that polar conditions do not systematically generate an increase in anxiety. Anxiety levels were found to be significantly higher for Indian personnel on the journey to Antarctica than during residence and return journey (Dutta Roy & Chundra Deb, 1996; Dutta Roy et al, 2000). Sasaki et al (1980) found anxiety levels for Japanese personnel were stable while aboard ship and increased just before arrival and winter-over, during the last three months of stay. Carrere et al (1991) found increases in anxiety over winter. Consistent with stress theories that emphasise perceived control as a determinant of coping (Karasek, 1979), Sandal (2000) found that land-based participants consistently reported higher anxiety than personnel on board ship.

3.6 Heightened Friction, Hostility And Conflict

> *'Every moment of daily life is communal, from the most mundane to the most exceptional. There is no escape from the group which holds everyone a prisoner.'*
> (Rivolier & Bachelard, 1988:80)

Interpersonal relationships and the demands of adjusting to the enforced intimacy of a closed, isolated group over the long polar winter represent the most significant stressors for Antarctic personnel (Stuster, 1996; Stuster et al, 2000). Conflict threatens group cohesion which is essential for safety, effective performance and the accomplishment of the scientific mission (Foushee, 1984). Social pressure to comply with group norms and goals is very strong (Janis, 1971; Helmreich, 1983; Douglas, 1995) and conflict may occur between the core station group and individuals or cliques whose behaviour violates group norms. Those who are uncommunicative, hostile, moody, and display poor personal habits may be subject to ostracism and scapegoating (Palinkas, 1989).

The isolation and confinement of the Antarctic winter place groups at particular risk of conflict since there is little possibility of evacuation or of obtaining outside help (Rothblum; 1990). Heightened friction, anger and irritability have been reported by several researchers (Law, 1960; Macpherson, 1977; Strickland, 1964; Gunderson & Nelson, 1963; Gunderson, 1963b, 1974; Palinkas, 1986; Strange & Youngman, 1971; Taylor, 1998). In early research, conflict was thought to be due to differences in interests, values, discipline and structure imposed on navy personnel and the more unstructured and independent lifestyles of scientists (Nantani & Shurley, 1974). Small groups under stress were more likely to develop intragroup conflict (Seymour, 1971; Doll & Gunderson, 1971) due to limited activities, privacy and space. Subdivisions along national lines have also been reported in Antarctica (Taylor, 1987).

The presence of extreme or rigid points of view can lead to tension and conflict (Gunderson, 1963b, 1966a). Most interpersonal problems are precipitated by trivial issues (Stuster, 1996) that become exaggerated in the 'pressure cooker' environment of the isolated and confined group. Previous innocuous mannerisms of personnel become magnified into intolerable flaws as the result of proximity and duration. Standards of personal hygiene and appearance may slip and cause offence to others (Fraser, 1968ab). Perhaps the most extreme example of interpersonal problems can be found in the account of the International Biomedical Expedition to the Antarctic (IBEA) (Rivolier et al; 1988) where animosities were such as to damage family relationships upon the expedition's return, and tensions among those who participated on the traverse persisted for at least five years afterwards.

4. Positive Effects Of Stress

> *'This stay in another world, seeming far beyond that of humans, was and remains a quasi-spiritual experience of immersing oneself in the original, untouched splendour of nature, producing a kind of oceanic feeling at the most archaic level of the co-self.'*
>
> (Bouvel, 1999: 365)

All who visit the Antarctic are changed by it (BAS, 2002) and for many people it is a positive experience (Suedfeld, 1987; Palinkas, 1992; Suedfeld & Mocellin, 1987, 1989; Carrere et al, 1991). Diaries of early polar explorers make many references to experiences of beauty, serenity and self-growth (Mocellin & Suedfeld, 1991). Many Antarctic personnel reapply for duty and most consider it the best year of their lives (West, 1984). For some, the polar environment offers time-out from over-stimulation and a brief respite from stressors of work and family back home (Palinkas et al, 1998). Support for positive effects comes from studies of winter-over personnel reporting an increase in independence, self-reliance, greater self-discipline, tolerance, flexibility, patience, self–understanding, an increased capacity for intimate involvement, and enhanced self-esteem and self-efficacy from having successfully met the challenge of winter-over (Mullin, 1960; Nantani & Shurley, 1974; Taylor, 1973, 1984, 1987; Taylor & Shurley, 1971; Kay, 1984; Oliver, 1991; Suedfeld, 1987).

Long-term beneficial effects on health and well-being, including reduced rates of hospitalisation have also been found (Palinkas, 1986, 1987; Palinkas et al, 1989). Palinkas (1991b) followed up 384 US navy personnel who wintered-over in Antarctica and, in comparison with 2,396 equivalent controls assigned elsewhere, found they had made long-term gains in health and well-being, reformulated their life goals, were more considerate, and accepted more occupational responsibility than previously. In the light of these positive reactions to stress, Palinkas et al (2000a) argue that Antarctic psychology has been constrained too long by its focus on psychopathology and should utilise the Salutogenesis model (Antonovsky, 1979) which seeks to explain how some people stay healthy despite exposure to stress. According to the salutogenic hypothesis, good adaptation depends on a strong sense of coherence (a personal predisposition towards experiencing one's world as comprehensible, meaningful and manageable) and one's ability to utilise resistance resources to avoid and manage stress.

Several questionnaire batteries, including the Polar Psychology Project (Suedfeld et al, 1989) have incorporated the Sense of Coherence (SOC) questionnaire (Antonovsky, 1987). Results appear inconclusive. Psychological studies of a Japanese winter-over group (Ikegawa et al, 1998) found Antarctic personnel scored lower on SOC tests compared with normalised data. A study of psychological adjustment during three Japanese Antarctic research expeditions found subjects were generally high in stress resistance (Weiss et al, 2000) but decreased in hardiness, as measured by the Personal View Survey (PVS) (Kobasa, 1979), corresponding to psychosocial changes approaching end of winter.

5. Coping & Adaptation In Antarctica

Antarctic sojourners face novel life and work conditions that require effortful, sometimes unusual coping strategies (Fischer, 1994). Coping and adjustment in Antarctica has traditionally been measured in terms of task performance, social compatibility, and physical and emotional

health (Gunderson, 1974). The actuality of daily winter living may be restricted and monotonous but reasonably comfortable (Mocellin et al, 1991). Most researchers agree that it is the isolation and confinement - with its related socio-cultural and psychological stressors – that represents the main challenge to adaptation and requires the greatest coping effort (Stuster, 1996), and that these stressors are more demanding for winter-over personnel than those present during the Antarctic summer.

Nothing is considered more important that the preservation of group harmony (Law, 1960). In the Antarctic winter, removing oneself permanently from tense social situations is not a viable option. Travel outdoors for even brief periods is restricted by extreme cold, darkness and policies designed to promote safety and reduce the risk of injury. In response to these constraints, individuals develop behaviour patterns to contain conflict. Most people consciously attempt to remain inoffensive and tolerant of others and deliberately avoid competitive games or emotional communication (Harrison & Connors, 1984). Open expression of aggression is avoided or deflected through arguments about politics, music etc. (Taylor, 1973). Antarctic residents develop their own language idioms and humour to deal with potential conflict (Macpherson, 1977). The maintenance of cleanliness and neatness in living space is also important to maintain group harmony.

Social withdrawal, considered maladaptive in wider society (Lynch, 1977), is a useful coping strategy in Antarctica that allows individuals to reduce stimulation and regain 'psychological homeostasis.' Many spend 60% of their leisure time alone in their dormitory rooms (Carrere et al, 1991). Privacy and restricted social contact provide the opportunity to focus on complex tasks, 'down time' to recover from stressful situations, and the chance for small subgroups to interact freely. A 'buddy system' and the vigilance of station leaders/medical officers ensure that no personnel slip into a pattern of extreme withdrawal called 'cocooning' (Stuster, 1996). However, reliance upon social support, which is adaptive from a health standpoint in wider society, is considered maladaptive in Antarctica (Cobb, 1976). The station micro-culture values self-sufficiency, which further weakens the efficacy of this strategy.

Palinkas & Browner (1995) found an increase in the use of avoidance and emotional discharge as coping mechanisms in a study of winter-over personnel in the US Antarctic Program, 1988-1989. Studies of Japanese research expeditions found increased scores on 'planning orientation' possibly needed under Antarctic conditions that are not conducive to impulsive or carefree approaches. A decrease in hardiness was interpreted as an indication of a greater appreciation of threat, rather than the challenge, of the austral winter and a lowered sense of being able to control events and outcomes (Weiss et al, 2000). Emotion-focused coping was found in studies of Italian Antarctic summer campaigns together with a decrease in social support and problem-focused coping (Peri et al, 2000b). This type of coping - hypothesised as 'frozen reactivity'-

indicated a diminution of active affect, including effortful coping, in order to reduce the expenditure of energy to protect themselves from frustration and emotional deprivation.

5.1 Pastimes

Recreational pursuits available at larger stations include bowling, volleyball, basketball and indoor soccer. Science lectures, craft shops, bars, clubs, and exercise classes help counter the negative effects of isolation. Passive recreation involves light reading, listening to music, radio and watching films or TV. Conversation, growing plants and making music are the most frequent pastimes. Many plan to read and study for self-improvement but rarely accomplish this goal during the Antarctic winter (Rothblum, 1990; Stuster, 1996).

5.2 Food & Celebrations

Food helps maintain group morale, cohesion and productivity and assumes elevated importance as normal sources of gratification are denied. People eat to be sociable or because there is little else to do. Significant weight gains are not uncommon (Bouvel, 1999). Special meals, group discussions, theatricals, masquerade balls, elections etc. break the monotony of routine and help develop teamwork, solidarity, camaraderie, social exchange and cooperation in work (Stuster et al, 2000). Birthdays, national and religious festivals, Christmas and New Years Eve are the most salient celebrations and mark the passage of time. Midwinter is uniquely celebrated in the Polar Regions. There have been anecdotal reports that everyone drinks more during winter as there 'is nothing else to do.' Alcohol use varies seasonally according to the makeup of winter-over crews and morale (Stuster, 1996). Excessive alcohol consumption is of particular concern due to the hazardous nature of the working environment and risk of accidental injuries (Dembert, 1995).

5.3 Other Coping Strategies

Outside satellite communication is crucial for morale particularly with regard to personal, mission-related and communication lag times. In the absence of normal diurnal cues, adherence to a schedule of sleep and activity is critical to sustain productivity and health. Most Antarctic managers insist that schedules be followed. Debriefing interviews are important for winter-over personnel leaving the station and readjusting to returning home (Stuster, 1996). Collected systematically, these interviews have provided data for numerous Antarctic studies (Doll & Gunderson, 1971; Gunderson, 1974) and for evaluating the success of psychological screening.

Training before the expedition is important. Well-prepared and experienced personnel have an enhanced ability to cope with the polar environment, including its stress-inducing social pressures (Defayolle et al, 1985; Gunderson & Palinkas, 1991; Lantis, 1968; Lugg, 1975; Mocellin & Suedfeld, 1991). The focus of mission planners has expanded from concerns for

survivability to an emphasis on the achievement of human goals and a sense of well-being (Clearwater & Coss, 1991). Taylor (1998:66) advises novice winter personnel to make detailed mental preparations; to stabilise family relationships; to be prepared for minor personal dysfunctions; to set individual and group goals and ways of achieving them; to question personal behaviour, attitudes, sensitivity, targets, ability, responsibility and determination; and to consider whether they have sufficient personal resilience/resources to make their Antarctic sojourn more enjoyable than endurable. Few studies actually include advice and detailed preparation for personnel wintering-over. Most training literature is based on Antarctica as a useful space analogue (Kansas, 1988; Rivolier et al, 1991b; Nicholas, 1989; Stuster, 1996).

The BAS doctors train intensively for six months to prepare for their Antarctic sojourn and, along with other BAS personnel, attend a week-long briefing conference to learn important aspects of Antarctic work and living (Bradbury, 2002). In addition, a 'virtual visit to Antarctica' and handbook provide information on physical aspects of Antarctic living, clothing, key health points, telemedicine, safety, carbon monoxide poisoning, communications, environmental management etc. (Lugg, 1998; BAS, 2002).

6. Moderators Of The Stressor-Strain-Coping Relationship

Individual differences in coping and adjustment in Antarctica are moderated by three sets of factors: (i) Individual personality characteristics – low need for social stimulation and support; (ii) Sociocultural background – educational, occupational status; (iii) Research station 'microculture' (Nantani & Shurley, 1974; Palinkas, 1989).

6.1 Coping as Compromise

Coping for the individual is a compromise between the demands of the group and the needs of the individual (Alland, 1987). On the one hand, the individual needs to be self-reliant, autonomous, competent and confident without his or her usual support systems. On the other hand, the group needs to be a cohesive unit demanding co-operation, conformity to group norms, and compliance to health and safety rules, in order to meet mission performance criteria (Palinkas et al, 1995c).

According to Palinkas (1992) the Antarctic group adapts by organising several autonomous, self-sufficient individuals into a collective whole for the purpose of maintaining the continuity of the station itself. This organising process appears to be in three stages (Palmai, 1963; Smith, 1966; Macpherson, 1977; Stuster, 1996). Initially the group is open to interaction among members, and pairs form around common interests and backgrounds. Stage two is marked by the formation of cliques based on age, authority, occupational status, religious beliefs, recreational activities, etc. Stage three is the coalescence of the whole group around a social

core (Nantani & Shurley, 1974). However, at least one member may be isolated or a peripheral clique may form. Conflict is inevitable in all stages of group formation as the negotiation between individual and group needs hangs on a delicate balance between the normative and pragmatic rules that comprise the cultural system (Strickland, 1964). Group coalescence is most noticeable at the end of winter-over when replacements arrive and there is almost universal resentment at the presence of outsiders who disrupt or criticise established routines. Outsiders also provide a focus of displaced anxieties about rejoining wider society (Palinkas, 1989).

Using the Matrix of Interpersonal Processes in the Group (MIPG), Bouvel (1999) found moderate support for stages in group formation, the development of group norms, cohesion, and changes-in-the-self in a study of an isolated group of men wintering-over in a French Antarctic station. Peri et al, (2000a) demonstrated changes in socio-emotional dynamics within an isolated group during two Italian Antarctic summer campaigns using the MIPG. In campaign one, fear of revealing one's true self decreased over summer whilst idealisation of harmony and repression of tensions increased. In campaign two, idealization decreased even more, whereas the fear of revealing the self increased at the end of the stay

6.2 Culture as a Coping System

'Culture is not simply an organisation designed for the satisfaction of sociological needs, but rather a complex system of internalised adaptation prescriptions evolved to meet the coping needs of members of that culture.' (Carr, 1985:217). Each Antarctic station establishes its own unique microculture of norms, symbols, rituals and sanctions that provide an organising framework for the utilisation of individual resources and social networks as a means of coping with stressful conditions and life events (Palinkas, 1992). The scientific mission provides continuity and commonality and there is usually an explicitly stated norm that the community is a mutually supportive, integrated whole that will deal with difficulties and emergencies by concerted effort (Blair, 1983).

6.3 Symptoms As Coping

Palinkas (1989) argues that winter-over symptoms are not necessarily maladaptive but may represent the first short-term response to the environmental transition or provide a means of coping when others have failed. Symptoms and somatisation may represent coping strategies or alternative response styles developed to avoid stressful events acquired through socialisation or repeated learning experiences, and made acceptable by Antarctic sociocultural values and sanctions (Kleinman & Kleinman, 1985; Carr & Vitaliano, 1985). Thus, while health may be a measure of how well a population has adapted to its environment, the opposite is not necessarily true.

6.4 Personality

Individual differences in coping style are also moderated by personality, attitudes, beliefs and values. One person may find the environment harsh and threatening, another person may find it stimulating and challenging (Suedfeld, 1987). In an environment in which people cannot be replaced once winter has begun, appropriate personnel selection is vital (Gunderson, 1974). Thus, most early studies have concentrated on the identification of personal characteristics that predict potential maladjustment or poor performance in order to ***'screen out'*** potentially vulnerable individuals (Gunderson, 1966b, 1973; Gunderson & Nelson, 1965, 1966; Owens, 1966). Three sets of personality factors found to moderate the expression of winter-over syndrome and aid personnel selection are: ***emotional stability, task competence*** and ***social compatibility*** (Gunderson, 1973; Taylor, 1969, 1985, 1987). Subsumed under these three broad abilities are a number of personality traits identified as being beneficial to polar dwellers: likeability, flexibility, emotional control, patience, tolerance, sense of humour, self-confidence without egotism, the capacity to subordinate one's own interests, sustain motivation, work harmoniously as a team member, and the ability to be easily entertained (Gunderson & Nelson, 1965). DeMonchaux, Davis and Edholm (1979) found tolerance of others to be the most common characteristic of men rated as most popular at a British station.

Inner-directed personality types have fewer emotional problems during winter-over but group-centred personnel are less likely to be hospitalised after isolation and confinement (Rivolier et al 1991ab). Negative indicators of adjustment include a history of truancy or delinquency, strong hobby interests, aggressiveness, impulsivity, excitability and high achievement needs (Nelson & Gunderson, 1963; Nelson & Ovick, 1964). Extraverts are less successful at adaption than more inner-directed, quiet, retiring types (Strange & Youngman, 1971) who are self-sufficient and intelligent (Kay, 1984; Palmai, 1963).

Using multinational personality data from the Polar Psychology Project (PPP) (Suedfeld, Bernaldez & Stossel, 1989), Steel et al (1997) showed that polar people are better adjusted and better orientated toward work than normative groups. They also concluded that selection procedures and/or the nature of Antarctic work produce a group that is marked by particularly good personal and social adjustment. The personality vectors of men and women seeking out and meeting the requirements of polar work were found to be very similar. This is reasonable given that the demands of the environment and of the work are the same for both sexes (Maki Kahn & Leon, 1994). Their findings do not support wide-ranging hypotheses about gender-related differences in problem-solving and group functioning in polar settings (Rothblum, Morris & Weinstock, 1995).

6.5 Leadership

The traits and practices of effective leaders are crucial for determining Antarctic mission success reflected in productivity, safety, and harmonious teamwork (Bouvel, 1999). Quality and type of leadership has a powerful influence on the 'spirit of the expedition,' the cohesion of Antarctic groups, their behaviour, attitudes and morale (Stuster, 1996). Studies have identified the most important leadership qualities as: the ability to tolerate intimacy and status levelling without losing authority and group respect, self-reliance in the lonely responsibility of command, inner security; self-confidence, flexibility, emotional control; interest and concern for crewmembers; neutrality towards controversial issues; mediation skills; and likeability (Gunderson, 1966a; Strange & Youngman, 1971; Harrison et al, 1989; Blair, 1991). Weybrew (1991) noted that, whereas structure and direction of authoritarian leadership worked best in emergencies, participative leadership worked best in routine situations.

6.6 Occupational/Demographic Moderators

Early studies found that civilian scientists adapted better to the restricted environment than either military or meteorological personnel based on peer and supervisor ratings and motivation measures (Mullin, 1960; Nelson, 1965; Gunderson, 1974; McGuire & Tolchin, 1961). More recently, Steel et al, (1997) found that scientists were lower than military personnel on extraversion, and lower than technical/support staff on agreeableness and conscientiousness. However, they found no **significant** occupation-related personality differences in neuroticism, agreeableness and conscientiousness, shedding new light on the differential emphasis of various occupational groups on sociability, emotional stability and work ability. All Antarctic occupational groups showed higher levels than normative groups on these abilities.

However, a study of multiple task performance in a French wintering-over expedition (Sauer et al, 1999) found that scientists performed better on all tasks than technicians, although there were no serious performance decrements overall. Motivational factors were thought to have influenced the results as technicians did not increase their effort expenditure under high task demands. Older, well-educated individuals with middle/upper middleclass backgrounds displayed fewer emotional and physical complaints than younger, less educated personnel with lower middleclass backgrounds (Gunderson, 1963a; Palinkas et al, 1989). Taylor (1987) found that age and past polar experience were the best predictors of adaptation, and that predictions based on a combination of psychometric data and clinical interviews were superior to predictions based on test data alone.

Palinkas et al (2000b) suggest that ideal candidates for long duration missions in isolated and confined environments have the following characteristics: military service, low levels of neuroticism, low extraversion, low conscientiousness and a low desire for affection from others.

The emphasis on military service in peer and supervisor evaluations may reflect a bias in groups where social and demographic representation among leaders and members is unbalanced (Rohrer, 1961). Successful winter-over personnel are not glamorous adventurers, rather they do their work and then drink a few beers, shoot the breeze, or watch TV with their buddies (Blair, 1987).

7. Critique

Antarctic research has been criticised on several grounds: the focus on a pathogenic orientation and research tools, small and culturally narrow samples of male/military participants, overemphasising the threat of environmental hazards and harm from the environment, and underemphasizing individual and environmental differences, the attractiveness of the experience, opportunity and potential for personal growth.

Many early studies searched for personality characteristics that would predict maladjustment or poor performance in Antarctica (Gunderson & Nelson, 1965; Owens, 1966). The emphasis on 'selecting out' applicants for polar work has reflected and reinforced a 'pathogenic' orientation which is now criticised for emphasising the adverse aspects of the experience, the difficulties of coping, and failures of adaptation (Suedfeld, 1991a; Palinkas et al, 2000b). This pathogenic approach is reflected in the choice of instruments and techniques normally used to assess psychiatric problems, including, the Minnesota Multiphasic Personality Inventory (MMPI) (Blackburn et al, 1974; Butcher & Ryan, 1974; Oliver, 1991), various depression scales (Paterson, 1978), clinical interviews and debriefings (Crocq et al, 1973; Taylor, 1987). Despite the persistent search for negative features, the overwhelming conclusion has been that polar venturers are generally well-adjusted, competent and able to withstand the rigors of isolated living and symptoms of winter-over (Taylor, 1973:429).

Another shortcoming is that the role of cultural factors in polar adaptation has not been systematically addressed despite the multinational population of polar regions. The Polar Psychology Project (PPP) was developed as a cross–national investigation of how people deal with the contemporary reality of polar work in established Antarctic bases (Suedfeld et al, 1989) in contrast to the arduous travelling format of the IBEA, reminiscent of early polar studies which maximised stress. Both theory and research tools have become more sophisticated using recording devices, content, diary, and photograph analysis (Weiss et al, 2000; Ikegawa, 1998).The standard (PPP) battery incorporates measures of performance, personality variables such as hardiness, sense of coherence and telic dominance (Murgatroyd et al, 1978), motivation and stress management. Research has moved to ***'selecting in'*** candidates, searching for personality characteristics which can predict performance as well as 'screening out' those who are unlikely to adapt, partly stimulated by crew selection for analogous space missions.

There are few phenomenological studies or personal accounts of how the Antarctic experience, is integrated into one's life after the event, as in Johnson and Finney's (1986) analysis of Huntford's (1984) account of the Amundsen/Scott race to the South Pole. Diaries, official journals and logs provide unobtrusive, detailed accounts of events in chronological sequence and useful sources of behavioural and phenomenological information (Johnson & Suedfeld, 1996). Riessman (1993) suggests that the analysis of such narratives transcends the limitations of traditional research methods for understanding social life. Levesque (1991) argues that Antarctic research should focus on practical issues to help individuals cope and adjust to the transition. Stuster's (1996) diary study provides a practical handbook emphasising principles of habitability and over 200 recommendations to facilitate long-duration space missions and Antarctic adjustment.

Considerable logistic and methodological issues have confronted psychological researchers in Antarctica (Harrison et al, 1989), in particular, access to participants, funding, observer participation, and participant-disclosure. Harrison (1986) suggested that leaders and sponsors may be concerned about interference with personnel decisions and potentially embarrassing results, and participants might fear that findings may disqualify them, challenge their self-images as resourceful people, or draw attention to controversial activities. Control group identification and achieving pre-test post-test experimental design is difficult. There is little research on individuals who are unwilling or unable to withstand the pressures of Antarctica. Once personnel return home they are difficult to locate and obtain permission for further research.

It is difficult to find research materials that reflect the demographic diversity of small group populations and individual differences often outnumber group consistency, which means that results are unlikely to achieve traditional statistical significance. More recent inclusion of psychodynamic studies of group analysis and functioning (Bouvel, 1999) contrasts with the majority of Antarctic research from English speaking countries based on quantification and experimental design. The positivist approach gives little idea of the process of individual functioning and frequently obscures the pattern of general dynamics of the adaptation process (Soroko et al, 1984). However, although enlightening and informative, psychodynamic studies use psychological language that may be difficult for Antarctic visitors to relate to and apply in practical terms.

In Antarctic research, the psychologist, not the environment itself, has defined the meaning of 'extreme, isolated, confined and unusual.' The crucial determinant of the stress response is not solely environmental but an experience defined by the meaning of the environment to the person, i.e. the impact of the Antarctic environment is filtered through a person's physiological and psychological information processing systems (Suedfeld, 1991b:137). Thus, Mocellin et al

(1991:33) recommend that researchers should study environmental stress in terms of interaction effects rather than main effects. Similarities and differences in the meaning and effects of the Antarctic experience should be studied according to age, gender, personality, educational background, occupation and experience. Veterans, for example, offer a rich source of phenomenological study as 'deepeners,' indicating their ability to look for, find and examine complex aspects of a superficially monotonous setting. Women have wintered-over since 1946 but it was not until 1970 that they arrived in larger numbers, were included in research, and the nature of their experiences recorded (Rothblum et al, 1998).

The main criticism of polar psychology comes from Mocellin & Suedfeld (1991:704) who concluded from their diary studies of UK expeditions of the heroic age that 'the polar experience was not generally aversive or stressful, and that the popular bias to the contrary is at least partly a result of overgeneralisation, dramatisation and cognitive assimilation.' They argue that present-day polar living is very different from the days of early expeditions and research such as the IBEA (Rivolier et al, 1988), which deliberately built in high levels of exposure and limited use of resources. Mocellin et al, (1991:30) suggest that environments that appear dramatically stressful cannot be assumed to have pervasive negative effects; one must look at how individuals in the environment actually experience it. Individual coping abilities have been underestimated and environmental difficulties overgeneralised. The vast majority of Antarcticans complete their assignments without major problems and, indeed, the experience may result in long-term benefits in health, well-being, self-reliance, self-efficacy and professional success (Palinkas, 1991ab). However, this may be due to the fact that one would expect people who pass the selection process to cope well with the polar environment and that psychometric instruments may fail to pick up some stress reactions (McCormick et al, 1985).

In summary, the Antarctic experience may be viewed on a continuum from negative and threatening to challenging and exhilarating, mobilising an individual's maximum coping resources to perform at optimum levels. The experience intensifies both positive and negative aspects of human relationships (Peri et al, 1991). Antarctica offers a rich source of psychological studies within the quantitative and qualitative paradigms. With respect to the stress paradigm, there is particular scope for studying the positive and challenging aspects of stress, including Salutogenesis, resistance resources, hardiness, self-efficacy, small groups and leadership. The review also emphasises that Antarctic psychology should study not only observable stressors and strains, but also the meaning of the experience for the person - for many a peak experience.

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