A MULTI-METHOD INVESTIGATION OF THE PSYCHOSOCIAL WORK ENVIRONMENT AND NATURE OF WORK-RELATED STRESS OF NHS PHYSIOTHERAPISTS AND OCCUPATIONAL THERAPISTS.

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Overall Abstract

Background: The volume of empirical literature and national reports with accordance amongst findings suggests there is strong evidence for the proposition that established work-related factors for healthcare professionals may also be strong predictors of stress and associated adverse health outcomes for physiotherapists and occupational therapists employed by the NHS. The extent of published research specific to physiotherapists and occupational therapists is limited. Research targeting therapists is therefore, a prerequisite for improving knowledge and understanding the nature of therapists psychosocial work environment and work-related stress. **Research objective:** The objective of this research is to investigate the psychosocial work environment and nature of work-related stress of NHS physiotherapists and occupational therapists. And in doing so establish: a) how work-related stress is experienced by physiotherapy and occupational therapy employees in the NHS, and b) how we understand the determinants of stress and structural and social resources that counteract stress, and c) the implications of these for therapists' health. **Research design:** This programme of research is a multi-site, multi-method (quantitative and qualitative) design. It is composed of three studies each designed to make possible (in part) the overall research objective. The first study is a quantitative self-report survey of psychosocially determined work-related stress amongst NHS physiotherapists and occupational therapists. The second study is a qualitative exploration of therapists' experiences of the physical and psychosocial work environment and personal meanings prescribed to the experience of work-related stress. The third study; designed to shed light on anomalous results and findings from the first two studies, is a quantitative self-report survey of physiotherapy and occupational therapy managers' understanding and management of workplace stress. **Results and findings:** Study one and two suggest that the clinical psychosocial work environment of therapists is experienced as rewarding. Work-related factors, such as high work-related demands,

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have the potential to determine stress, but at the time of the research, were not reported to be experienced as stressful. The in-depth interviews revealed that rapid and ongoing organisational change, lack of effective top-down communication, together with issues relating to demands for heightened effectiveness were determinants of stress for NHS therapists interviewed. Results from the study one and findings from study two reveal differences in perceptions and reporting of supportive line management. Study one indicates that therapists' self-report high level of supportive line management, whilst the in-depth interviews (study two) exposed a lack of straightforward, regular, accessible instrumental and emotional line management support. Study three, found that line-managers have some or most of the knowledge required to identify, prevent and tackle stress at work. Importantly, they report an understanding of the critical role of line managers in tackling stress and appropriate line manager behaviours for minimising and managing employee stress. **Conclusion:** Conceptually integrated results and findings illustrate that whilst satisfied with their clinical role, therapists are experiencing work-related stress as a consequence of organisational aspects of their working environment.

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Introduction

1.1 What is work-related stress?

Despite the widespread use of the word in both academic and non-academic publications, there is a lack of consensus with regard to what actually constitutes work-related stress. Nelson and Quick (1994) state that:

> "Stress is one of the most creatively ambiguous words in the English language, with as many interpretations as there are people who use the word. Even the stress experts do not agree on its definition." (p. 202)

Beehr (1998) states that "job stress" is an area with the potential to be plagued by confusion, at least partly because of the general, nontechnical, popular usage of the word stress. The author further suggests that even amongst researchers, stress had sometimes been used to infer an environmental "stressor" stimulus or an individual's strain or distress reactions.

This situation transpired, in no small part, as a result of the various ways in which stress has been operationalised. For example, stress has been treated as either a stimulus, a response, an environmental characteristic, an individual attribute, and/or an interaction between an individual and his or her environment (Dowden & Tellier, 2004). A brief review of definitions of work-related stress contained in mainstream textbooks and publications confirm these views. Earnshaw & Cooper (1996) states that stress is any force that puts a psychological or physical factor beyond its range of stability, producing strain within the individual. Additionally, Hellriegal et al (1992) describe stress as a consequence of or a general response to an action or situation that places special physical or psychological

demands, or both, on a person. Whereby, the experience of stress involves the interaction of a person and that person's environment.

In 1995, the Industrial Society links the expression of stress to negative changes in personal behaviour, which can be attributed to an imbalance between pressure and people's current ability to cope with it. In comparison, Greenberg & Baron (2000) defined stress as a complex pattern of emotional states, physiological reactions, and related thoughts in response to external demands (which the authors termed as 'Stressors').

Although there remains disagreement over whether stress is the antecedent or the result of various stressors; the latter conceptualisation is used in the present thesis as this definition fits well within the broader confines of the work stress literature. Moreover, the terms work related stress; job stress and occupational stress are used interchangeably and are often used to describe a field of study focusing on psychosocial aspects of work that detrimentally affects employee health. Within the thesis the term work-related stress (WRS) is used, which refers to the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources or needs of the employee.

Despite the ambiguity surrounding the term, work-related stress cannot be dismissed. Work-related stress has become a major workplace issue and during the past several years' deep levels of concern have been expressed, by such bodies as the Department of Health; the Health and Safety Executive and the Trade Unions, regarding the high costs of stress in both human and financial terms.

1.2 Is stress work-related?

Stress is a complex issue with variation in definitions (as outlined above) that is not often readily diagnosed with a treatment strategy that

does not have an established research base, and as of yet, not conclusively attributable to work. Given the unresolved definitional and conceptual issues in the stress debate (i.e. what is stress, how is it measured, and what is the extent of its effect) assessing work-place stressors and identifying their effect on stress remains a significant challenge that warrant further investigation to establish a knowledge base to inform these issues.

Critics of the link between work-related factors and stress, such as the Australian Chamber of Commerce and Industry (ACCI, 2002), draw attention to the fact that work stress research frequently relies on a self-report methodology that is informed by an assortment of theoretical approaches and models of stress, which they argue have been shown to be inadequate in explanatory or predictive value that has lead to inconclusive outcomes and limited understanding. Additionally, The ACCI proposed that research using this approach does not provide robust statistical or scientific evidence of the links between work-related factors and the experience of stress by employees.

To support their assertion the ACCI make reference to the Health and Safety Executive (HSE) commissioned critical review of the major measures of stress in 2001. (HSE Contract Research Report 356/2001[1]). The main aim of this review was to assess the evidence for the reliability and validity of a range of psychosocial (hazard) stress measures. ACCI argue that the main findings of this review suggest that compared to the substantial number of papers published on stress that use measures of psychosocial stressors, little substantive evidence was found which could be usefully analysed due to a lack quality data or inadequate detailed information contained within the studies reviewed. Furthermore, they state there is limited variation in the types of stressors measured and techniques used with restricted evidence to

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[1] CRR 356/2001. A critical review of psychosocial hazard measures. Can be accessed at: http://www.hse.gov.uk/research/crr_htm/2001/crr01356.htm

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support the reliability and validity of the outcome measures used in the studies reviewed.

Whilst the findings of the HSE report are important, they cannot be used in isolation to underpin the suggestion that 'no evidence' exists of the links between work-related factors and stress. The ACCI further states that HSE review recommends re-examining the theory of psychosocial hazards 'because of a profound absence of knowledge of what we are measuring, and why and how we are measuring it'" (p.5). In fact, the recommendation in the HSE report is "to re-examine theory in the area of psychosocial hazards in order to consider more carefully what we are measuring, and why and how we are measuring it." Additionally, the report highlights that other theoretical approaches which reflect the complex components of stress that try to unpack how particular kinds of work events may lead to emotional and health reactions are important to the overall debate and should be included. As the HSE state, "if measurement is not based on sound theory then the problems with content and construct validity will simply not go away.". (p.83).

One of the main implications of the HSE report is that the quantity and quality of evidence relating to the 'reliability and validity' of stress measures is limited, but rather than consequently dismissing the concept of a link between work factors and stress; as perhaps the ACCI would wish readers to do, the HSE report emphasises that it is not possible to simply stop assessing psychosocial stressors until the required research into existing measures and the development of alternative measures is complete. The HSE report continues to say that now these weaknesses have been identified steps can be taken to improve such measures of psychosocial stressors. The report further points to the fact that that in practice these measures are probably rarely used on their own but supplemented with other forms of investigation and assessment, which will give additional strength to research being conducted.

In rebuttal of a link between work and stress, the ACCI cites the HSE commissioned critical review as supporting evidence of their assertion that researchers "are no closer to resolving the fundamental issues of definition and causal effects nor providing proof of a linkage between so called workplace stress and disease," (p. 1). Critics, such as the ACCI, do have a point that should be openly recognised and discussed., As previously stated, stress has various definitions' and is often not readily diagnosed or effectively treated and as of yet, not conclusively attributable to work, but whether the assertion that there exists no 'proof' of a link between work-related factors and stress can be so readily applied to today's context is highly contestable. Work-related stress research encompasses a very large and diversified field; there is a huge body of research on stress emanating from the USA, EU, UK and Australia, which examines the relationship between work and stress. Even a cursory review of the literature shows that there have been many studies and conceptualisations of the effects of negative work factors on stress. In conclusion, the volume of empirical literature and national reports plus the degree of accordance amongst the findings, suggests there is strong evidence for the proposition that established work-related factors can predict stress and related adverse health outcomes, and this needs to be explored across various occupations.

1.3 Stress at work: What is the extent of the problem?

Several previously published studies conducted within the workplace indicate that job related stress can be viewed as a serious issue that affects almost all workers at one time or another. For example, The Health and Safety Executive (HSE), the organisation responsible for policy related to occupational safety and health in Great Britain[2], have to date commissioned eight surveys of self-reported work-related illness (covering 1990; 1995; 1998/1999; 2001/02; 2003/04; 2004/05; 2005/06;

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[2] Information is collected from Northern Ireland; but this information is not routinely published since HSE's jurisdiction is restricted to Great Britain only.

2007/08). As summarised in table 1.1 below, the HSE findings and those of other studies, suggest that work-place stress has become one of the largest problems faced by the UK workforce (HSE guide 'Tackling work-related stress'). This problem is illustrated in the findings from the most recently published HSE survey[3] (SWI 2007/08) which found that, in 2007/08 an estimated 442 000 people in Great Britain, who worked in the last year, believed that they were suffering from stress, depression or anxiety caused or made worse by their current or past work. This equates to 1500 per 100 000 people (1.5%) who worked in the last 12 months in Great Britain. This prevalence rate of self-reported work-related stress, depression or anxiety has been broadly level over the years 2001/02 to 2007/08, with the exception of 2005/06 where the prevalence rate was statistically significantly lower than all other years.

With regard to incidence, the report states that an estimated 237 000 people, first became aware of work-related stress, depression or anxiety during 2007/08, giving an annual incidence rate of 780 cases per 100 000 people (0.78%). Similarly to prevalence, the incidence rate of self-reported work-related stress, depression or anxiety has been broadly level over the years 2001/02 to 2007/08, with the exception of 2005/06 where the incidence rate was statistically significantly lower than all other years.

Furthermore, an estimated 13.5 million working days (full-day equivalent) were lost in 2007/08 through self-reported stress, depression or anxiety caused or made worse by work. On average, each person presenting with the characteristics of work-related stress took an estimated 30.6 days off in that 12 month period. This equates to an annual loss of 0.56 days per worker. The number of days lost per worker in 2007/08 was of a similar order to those in earlier years, with the exception of 2005/06, where the rate was lower than in 2007/08.

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[3] http://www.hse.gov.uk/statistics/lfs/0708/strocc2_3yr.htm

And finally, in relation to employment related details, professionals working within health and social welfare, which includes nursing, were listed as being one of the high risk occupation groups with statistically significantly higher than average prevalence rates (three-year average) of self-reported work-related stress, depression or anxiety, (where sample numbers were sufficiently large to provide reliable estimates). Others high risk occupations included, teachers, and housing and welfare officers, along with certain professional and managerial groups

Table 1.1 Work-related stress: extent of the problem

Work-related stress: extent of the problem
• In 2007/08 an estimated 442 000 individuals in Britain, who worked in the last year, believed that they were experiencing work-related stress at a level that was making them ill, according to the Labour Force Survey (LFS). • The 2007 Psychosocial Working Conditions (PWC) survey indicated that around 13.6% of all working individuals thought their job was very or extremely stressful. • The annual incidence of work-related mental health problems in Britain in 2007, as estimated from the THOR[4] surveillance schemes OPRA[5] and SOSMI[6], was approximately 5,750 new cases per year. However, this almost certainly underestimates the true incidence of these conditions in the British workforce. • According to self-reports from the LFS an estimated 237 000 people, who worked in the last 12 months, first became aware of

[4] THOR: Voluntary medical surveillance schemes in The Health and Occupation reporting network.

[5] Occupational Physicians Reporting Activity (OPRA)

[6] Surveillance of occupational stress and mental illness (SOSMI)

work-related stress, depression or anxiety in 2007/08, giving an annual incidence rate of 780 cases per 100 000 workers.

- Estimates from the LFS indicate that self-reported work-related stress, depression or anxiety accounted for an estimated 13.5 million lost working days in Britain in 2007/08.

- LFS survey data suggests the incidence rate of self-reported work-related stress, depression or anxiety has been broadly level over the years 2001/02 to 2007/08, with the exception of 2005/06 where the incidence rate was lower than all other years.

- THOR surveillance data shows a mixed picture with psychiatrist reports of work-related mental health remaining stable between 2000 and 2007 but occupational physician reports showing a clear upward trend over this time period. The ONS omnibus survey shows no overall trend in the proportion of people saying their job was very or extremely stressful between 2004 and 2008.

- Occupation groups containing teachers, nurses, and housing and welfare officers, along with certain professional and managerial groups have high prevalence rates of self-reported work-related stress according to the LFS. The LFS also shows people working within public administration and defence to have high prevalence rates of self-reported work-related stress.

- The THOR datasets SOSMI and OPRA also report high incident rates of work-related mental illness for these occupational groups, along with medical practitioners and those in public sector security based occupations such as police officers, prison officers, and UK armed forces personnel.

The Psychosocial Working Conditions (PWC) Surveys' present data from an annual series of surveys on psychosocial working conditions that began in 2004. These surveys were set up to monitor changes in the psychosocial working conditions of Demand, Control, Managerial Support, Peer Support, Role, Relationships and Change in British

workplaces. These are the working conditions which HSE is aiming to improve amongst British workers by means of employers implementing its Management Standards approach to tackling work-related stress, that was launched in November 2004.

Although reporting that around 13.6% of all working individuals thought their job was very or extremely stressful, results from the 2007 survey[7] predicted that the continuing promotion of the Management Standards should result in significantly improved psychosocial working conditions over the next year. However, the most recent 2008[8] report found that psychosocial working conditions for British employees did not significantly changed between 2004 and 2008. The predicted improvement in working conditions as a result of the HSE's roll-out of the Management Standards for work-related stress had not, as yet, materialised and the number of workers reporting that their job is highly stressful was not steadily decreasing. The report suggests the lack of impact to date of the Management Standards could reflect the long latency between organisations first implementing the process and benefits being realised.

In summary, the problem of stress as a result of work is widely recognised as an extensive problem, and the prevalence of stress is a topic which has provoked a great deal of interest with many resultant surveys. Available data shows that stress is the cause of considerable costs to employers and reduced quality of health and wellbeing for employees.

1.4 Stress at work: the National Health Service

The National Health Service (NHS) is one of the UK's largest employers. In consideration of its role and expertise in ministering to the nation's health, Collins (2006) shrewdly poses the question: "how healthy is the NHS with respect to workplace stress?" (p. 311).

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[7] Accessed via: http://www.HSE.gov.uk/statistics/pdf/pwc2007.pdf
[8] Accessed via: http://www.HSE.gov.uk/statistics/pdf/pwc2008.pdf

Numerous studies and reports show high percentages of NHS staff reporting high levels of stress and subsequent related ill-health. For example, data from the Workforce Survey[9] (2008) on 30,000 staff working across 17 NHS trusts shows stress and associated psychiatric problems accounted for as much as 15% of all days lost due to sickness absence in 2008. This compares with 4% of days lost in the same year due to stress among 40,000 staff, working across a range of other occupations in both the public and private sector; including education, manufacturing, retail and local government. Furthermore, the interim report from the independent NHS Health and Wellbeing Review[10] (Boorman, 2009); found that more than a quarter of all NHS staff absence is accounted for by stress, depression and anxiety. Interim report additionally found that more than half of the 11,000-plus members of staff who contributed to the study said they felt more stressed than usual at the time of completing the survey.

The most recently published Healthcare Commission's annual national survey of NHS staff[11] was conducted in 2008, in which almost 290,000 NHS employees were asked for their views on working in the NHS. It is believed to be the largest survey of its kind and provides the most reliable source of national and local data on how employees feel about working in the NHS and what they experience in their working lives.

There were a number of positive results from the survey. Although still relatively high in comparison to other occupations, there had been a marked reduction in the proportion of staff (28%) who said they had suffered from work-related stress in the last year compared with 2007 (33%) and 2006 (33%). In addition, the results demonstrated that staff were generally satisfied in their jobs, with responses consistent to

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[9] Accessed via: http://www.lga.gov.ac/lga/aio/1307932
[10] Accessed via: http://www.nhshealthandwellbeing.org/InterimReport.html.
[11] Accessed via:
http://www.cqc.org.uk/_db/_documents/National_NHS_staff_survey_2008_summary_of_key_findings.pdf

previous years despite the change that has taken place over that time. It also indicated that 94% of staff took part in some form of training. Staff responses indicated strong support from their line managers, with 71% saying their immediate managers encourage team working and are supportive in a personal crisis.

It is important to note that there is no national cut-off point below which it can be said that the prevalence of stress within the NHS or any organisation is acceptable. Evidence from the National Survey of NHS staff (2008) of what appears to be a noteworthy downward trend in work-related stress is encouraging. However, in consideration of the economic costs to the NHS and what the experience of stress costs the employee in regards to their general health and well-being, having an detailed description of work-related stressors (including psychosocial components) and the impact of stress remains an important issue, especially across all the professions (generally and discipline specific) that represent the diversity of health care provision across the NHS.

1.5 Work-related stress research within the NHS, is there a gap in the literature for a particular profession?

An extensive literature is being generated about the psychosocial environment in which health professionals work and the nature and prevalence of psychosocially determined work-related stress. Studies that have examined work-related stress amongst employees of the NHS have largely concentrated on nurse and to a lesser extent doctors (McGowan 2001; Stowder et al, 2001; Shader et al, 2001; Bratt et al 2000; Healy & Mckay 2000; Schmitz et al 2000; Demerouti, 2000). In contrast, little research has been conducted on physiotherapists and occupational therapists. This disparity cannot be explained as being due to the lack of therapists employed by NHS, since although less than nurses and doctors; 2005 figures indicate that a combined number of 36, 740 therapists were employed by the public sector (source: Health and Social Care Info Centre non-medical workforce census, 2005).

Such a quantity of employees cannot plausibly be regarded as an insufficient number to warrant research specifically aimed to establish information about the environment in which they work and of the impact such an environment may have on them both personally and professionally.

Anderson et al (1996) suggest that the paucity of research relating to Allied Health Professionals (AHP's), such as physiotherapists and occupational therapists, is due to these professions being regarded as politically less attractive than front line staff (i.e. doctors and nurses), which consequently impacts upon the amount of consideration and exposure given to these 'lower status groups' (p.94). Anderson et al (1996) argue that work-related stress is not confined to front line staff and in effort to establish evidence to support this contention; they conducted a study to identify sources of stress in the NHS. They did this by examining the similarities and differences in the perceptions and characteristics of seven occupational groups (nurses; doctors; AHP's; ancillary staff; works and maintenance; administration; and scientific staff). They found no significant difference in levels of stress (as measured by the Occupational Stress Index) experienced by the different occupational groups. Anderson et al (1996) interpreted this finding as supporting evidence for their hypothesis that all occupational groups within the NHS can potentially experience the same levels of work-related stress as one another. Anderson et al (1996) conclude by arguing that work-related stress within the NHS should no longer be regarded as affecting only nurses and doctors, and as a consequence research should be directed at other professions alongside frontline staff.

Despite this recommendation being made over a decade ago by Anderson et al (1996) an exploratory search of the British research literature (1996 to 2008) reasserts the earlier contention that little attention is paid to physiotherapists' and occupational therapists' experience of work-related stress. Only four quantitative research

papers were identified that in some way looked at work-related stress or potential stressors of therapists (CSP, 2004; Mandy & Rouse, 1997; Allen and Ledwith, 1998; Leonard & Corr, 1998). This represents a big gap within the body of work-related research literature, which is explored in more detailed in chapter 2.

1.6 Why this research is needed and what does it aims to achieve?

This doctoral research is aimed at bridging the identified gap in the literature, and it is based on the contention that all employees within (and external) to the NHS are exposed to potential stressors as a consequence of work. As mentioned, there exists already a substantial volume of work examining the causes of work-related stress amongst health care professionals such as nurses (McGowan 2001; Stowder et al, 2001; Shader et al, 2001; Bratt et al 2000; Healy & Mckay 2000; Schmitz et al 2000; Kirkaldy & Martin, 2000; Demerouti, 2000; Tyler & Cushway, 1992). Previously published and successive research highlights the same stress determinants amongst this and other public sector professions (i.e. role conflict and ambiguity; work overload; patient contact etc[12]). Physiotherapists' and occupational therapists' share these potential psychosocial risk factors with other health care professionals and therefore they may be as vulnerable to the experience of work-related stress. However, the extent of published research specific to physiotherapy and occupational therapy is distinctly limited in comparison to the other health care professional groups.

To know the effects of psychosocial work-related stress on NHS physiotherapists and occupational therapists is important for a variety of reasons. In particular, the psychosocial environment of therapists is an important component of their work experience, since alongside affecting their physical and psychological well-being it has the potential to exert a direct influence on their clinical development, professional growth and subsequent patient care. Moreover; there is a growing body of evidence

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[12] Refer to chapter 2 for further details and references

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to show that the nature of health professionals' jobs make it likely that they will experience psychosocial factors implicated in causing stress (role conflict; role ambiguity; and work demands; Edwards et al 2003; Haynes et al 1999) but the proliferation of work-related publications and research that underscores the importance of understanding the nature of profession specific causes and symptoms needs to be applied to the substantial numbers of the physiotherapists and occupational therapists within the NHS.

Research explicitly targeting physiotherapist and occupational therapists, is a prerequisite for improving knowledge and understanding of the true nature of therapists' work-related stress and subsequent health and wellbeing, and is the major rationale and objective for this thesis.

1.7 Research Objectives

The objective of this research is to investigate the psychosocial work environment and nature of work-related stress of NHS physiotherapists and occupational therapists. And in doing so establish: a) how work-related stress is experienced by physiotherapy and occupational therapy employees in the NHS, and b) how we understand the determinants of stress and structural and social resources that counteract stress, and c) the implications of these for therapists' health.

1.8 Research Aims

In order the answer the research question this research principally aims to establish the following:

1. Aim 1: Whether a) core psychosocial stressors and b) structural and social resources to counteract stress (as identified by accumulated evidence in occupational stress literature and by consensus amongst the theoretical literature) are also determining factors for NHS therapists' self-reported experience

of work-related stress. And c) to ascertain the relationship between work-related stress and therapists self-reported health.

2. Aim 2: Investigate physiotherapists' and occupational therapists' experiences of the physical and psychosocial work environment and personal meanings prescribed to the experience of work-related stress.

3. Aim 3: Establish physiotherapy and occupational therapy line-managers' understanding of workplace stress.

1.9 Research Design

This programme of research is a multi-site, multi-method (quantitative and qualitative) design. It is composed of three studies each designed to make possible (in part) the overall research objective. Each study is introduced and discussed in consecutive chapters: 2, 3 and 4 of this thesis. An overview of these research studies is presented below:

Chapter 2: An investigation of psychosocially determined work-related stress amongst NHS physiotherapists and occupational therapists.

This study aims to establish whether a) core psychosocial stressors and b) structural and social resources to counteract stress (as identified by accumulated evidence in occupational stress literature and by consensus amongst the theoretical literature) are also determining factors for NHS therapists' self-reported experience of work-related stress; and c) to ascertain the relationship between work-related stress and therapists self-reported health. This study is a multi-site quantitative design. Data is to be collected through a self-report questionnaire (COPSOQ) survey to be completed by qualified physiotherapy and occupational therapists' employed by the NHS. Analysis is to

include: descriptive statistics; Mann–Whitney U tests; and Spearman's rank correlations. The evidence from this study will indicate which factors within the psychosocial work environment of participating therapists are perceived as stressful and/or protecting against stress. As well as establishing if a relationship exists between work-related stress and health for this sample.

Chapter 3: Physiotherapists' and occupational therapists' experiences of the physical and psychosocial work environment and personal meanings prescribed to the experience of work-related stress.

This study aims to use in-depth interviewing to examine therapists' representations of their psychosocial working environments and the nature of work-related stress within this context, its psychosocial antecedents and outcomes. This study utilises a qualitative 'inductive approach' to the analysis of the data. This study will make possible the investigation of meaning applied by therapists to the experience of work-related stress and thereby adding qualitative depth to the objective of this research.

Chapter 4: Physiotherapy and Occupational Therapy Managers' understanding and management of workplace stress.

This study looks at therapy managers' views on stress; actual stress management practices; and their beliefs about who should be responsible for addressing work-related stress. The research method used in this study is a questionnaire survey. Analysis is quantitative and primarily descriptive. The importance of this study relates to the information it will provide about the management culture of the psychosocial environment in which therapists work and will go some way to clarifying the ambiguity surrounding therapists' perception of the role of line-management in work-related stress prevention.

The studies have been designed and conducted true to the assumptions of the respective paradigms, therefore maintaining the integrity and unique contribution of the methods of inquiry. Qualitative and quantitative results are presented independently (therefore alleviating concerns about combining mixed data sets). Integration of findings will occur conceptually in the discussion chapter (chapter 5) of this doctoral thesis.

Chapter TWO: An investigation of psychosocially determined work-related stress amongst NHS physiotherapists and occupational therapists.

Abstract

Background: There is strong and consistent evidence that the experience of work-related stress is related to a common set of psychosocial work-related factors. These factors have been shown to predict work-related stress in various healthcare professions in the NHS. Further, there exists a great deal of evidence to show how the relationship between stressors and the experience of stress can be buffered. Consequently, there is support for the proposition that for physiotherapists and occupational therapists working in the NHS these same factors will be predictive of work-related stress. What is more, it will also be likely that the structural and social resources known to counteract stress will mitigate both stress and health damaging effects of stress. **Aim:** to establish whether A) core psychosocial stressors and B) structural and social resources to counteract stress (as identified by accumulated evidence in occupational stress literature and by consensus amongst the theoretical literature) are also determining factors for NHS therapists' self-reported experience of work-related stress. And C) to ascertain the relationship between work-related stress and therapists self-reported health. **Methods:** This study is a multi-site quantitative design. Data is to be collected through a self-report questionnaire (COPSOQ) survey to be completed by a sample of qualified physiotherapy and occupational therapists' employed by the NHS. **Analysis:** is to include, descriptive statistics (Means, medians, standard deviations, and inter quartile ranges represented by box plots) to describe the main features of the data in quantitative terms. Mann–Whitney U tests to test significance. Whilst, Spearman's rank correlations are to be utilised to assess how well the relationship between two variables can be described. **Results:** N=179 usable questionnaires were returned. Results suggest that exposure to common psychosocial work-related factors, such as high demands, has the potential to have a direct influence on therapist's experience of stress and subsequently health outcomes. However, therapists are managing to avoid or minimize their experience of stress due to

intervening individual and situational factors. **Conclusion:** The assumption that therapists may experience stress as a consequence of their psychosocial work environment has not been supported. The evidence from this study does not indicate that the psychosocial work environment of participating therapists is perceived as stressful.

2.1 Introduction

There is a growing understanding that the NHS is a high risk sector for work-related stress moreover; accumulated evidence shows that even after controlling for other possible causes of the same outcomes such as socioeconomic status or personality factors, work-related psychosocial determinants of stress (such as, demands, work organisation and content of work, interpersonal relationships and leadership, individual-work interface), are associated with high reported levels of stress and a range of poor health outcomes. Research[13] demonstrates that these are the core determinants of stress across many occupations and professions both within and without the NHS. Research has also led to a number of insights relating to the structural and social resources to counteract stress. It appears that various psychosocial factors can enable people to respond to stress appropriately by enlisting resources that help meet the pressures and demands faced at work including, personal characteristics such as coping skills (for example, problem solving, time management) and the work situation such as a good working environment, social support and leadership.

In this chapter the broad evidence for this proposition is reviewed. Starting with a summary introduction to the literature on the core generic work-related psychosocial determinants of stress; the structural and social resources utilised to counteract stress and effects of psychosocial work-related stress on health. This is followed by a look at theoretical models of work-related stress, and is concluded with a review of work-related stress research conducted on National Health Service (NHS) employees in general, and research on physiotherapists and occupational therapists working within the NHS.

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[13] Research is reviewed later in chapter.

2.1.2 Psychosocial determinants of stress and resources used to counteract them.

The work environment is an important source of both demands and burdens causing stress, and structural and social resources to counteract stress. Although, individual differences have an indisputable effect on how people independently react to stressful environments and situations, there is however, a growing body of evidence from both the theoretical literature and research evidence that identifies a common set of psychosocial work-place characteristics that are experienced as stressful; and counteractive of stress, by the majority of the workforce (Dollard, et al, 2001; Cox, 1993; Kasl, 1987, 1990).

Numerous occupational stress models have been proposed that focus on common psychosocial work-related characteristics considered to be potential sources of work-related stress. For example, Cooper and Marshall (1978) developed a comprehensive model that categorises psychosocial work-related stressors into six broad categories (factors intrinsic to the job; role in organisation; relationships at work; career development; organisational structure and climate; home-work interface). Levi (1994) grouped together various psychosocial factors under the four headings of quantitative overload; quantitative underload; lack of control over work and lack of social support. More recently, Cox et al (2000) created ten categories under the two headings of 'context to work' and 'content of work' (context to work: organisational culture and function; role in organisation; career development; decision latitude and control; interpersonal relationships at work. Content of work: work environment and equipment; task design; workload and work pace; work schedule; home-work interface). And, providing a slightly different perspective, Polanyi (2004) identified from research on workplace conditions, organisational change and subsequent health implications, ten key characteristics of healthy workplaces needed to counteract work-related stress (clear & achievable work roles; reasonable work demands; employee control and decision latitude; social support; fair

treatment; adequate wages; satisfactory work hours; job security; and safe organisational climate.

There are the obvious similarities across these models, the psychosocial work-related factors that are considered to be determinants of stress are those to do with the intrinsic content of work and those to do with the social and organisational context of work. Within the generic research literature, determinants that are intrinsic to the job been found to include long hours, work overload, work schedule pressure, difficult or complex tasks, work pace, lack of variety, and poor physical work conditions (for example, space, temperature, light). Unclear work or conflicting roles and boundaries have also been shown to cause stress, as has having responsibility for people. The possibilities for job development are important buffers against current stress, with under promotion, lack of training, and job insecurity being stressful. There are two other sources of stress, or buffers against stress: relationships at work, and the organisational culture. Managers who are critical, demanding, unsupportive or bullying create stress, whereas a positive social dimension of work and good team working reduces it.

Work-related situations that are experienced as stressful therefore; are those that are unpredictable or uncontrollable, uncertain, ambiguous or unfamiliar, or involving conflict, loss or performance expectations. Stress as a consequence of work may be caused by work-related demands, work organisation and content of work, relationships at work and leadership; or by ongoing situations, such as, job insecurity. Resources that help meet the pressures and demands faced at work include personal characteristics such as coping skills (for example, problem solving, time management) and the work situation such as a good working environment, social support and leadership.

2.1.3 Are generic work-related psychosocial determinants of stress relevant to the NHS work environment?

Many studies have investigated the causes of stress amongst NHS healthcare employees and there is clear evidence to suggest that work-related stress experienced by NHS staff is often attributable the core generic work-related psychosocial determinants of stress identified in broader work environments. However; there is evidence of additional causative psychosocial factors that relate to the main practices of NHS health care staff such as, coping with emotional needs of patients and their families, uncertainty about treatment, poor patient diagnosis, death and dying, often referred to as 'emotional labour' (Phillips 1996).

McVicar (2003), conducted a systematic review of workplace stress in adult and child care nursing (1985 to 2003) which led to the identification of six main themes for the sources of workplace stress: Workload/inadequate staff cover/time pressure; Relationship with other clinical staff; Leadership and management style/poor locus of control/poor group cohesion/lack of adequate supervisory support; Coping with emotional needs of patients and their families/ poor patient diagnosis/death and dying; Shift working; and Lack of reward. These themes can be categorised as those to do with the intrinsic content of work and those to do with the social and organisational context of work and correspond closely to the psychosocial work-related factors that are considered to be common determinants of stress. McVicar (2003) states that these stressors are not unexpected as they relate to the main generic practices of health care employees particularly in the NHS.

Alongside child and adult nursing, as reviewed by McVicar (2003), sources of stress have been studied in NHS hospital settings, across a variety of healthcare providers such as, mental health nurses (Burnard et al 2000a, 2000b; Edwards et al, 2000a, 2000b, 2001; Kipping, 2000; Hannigan et al, 2000); consultants (Graham et al, 2001); doctors

(McManus et al, 2002; Fielden & Peckar, 1999); clinical psychologists (Hannigan et al, 2004) and psychiatrists (Fothergill et al, 2004). Although, it is difficult to compare the findings of the many reported studies due to for example, the use varying methodologies and methods of analysis, it is possible to conclude that similar findings emerge from these studies, which show causal factors of stress amongst healthcare providers in the NHS include, work overload and pressure, lack of control over work; lack of participation in decision making; poor social support; and unclear management and work role.

Overall the literature convincingly demonstrates that the common generic work-related psychosocial determinants of stress are predictive of stress for healthcare providers in the NHS; irrespective of type of training, area or type of clinical or nonclinical work. Hillhouse and Adler (1997) suggest that it is the actual characteristics of the work environment and workload that are of foremost importance when evaluating sources of stress rather than any differences in practice requirements.

Alongside establishing that work-related stress experienced by NHS staff is often attributable the core generic work-related psychosocial determinants of stress identified in broader work environments. Many studies have investigated the effects of stress on NHS staffs' health and well-being and within this body of research there is agreement that work-related stress is detrimental to the quality of health-professionals working lives, increases the incidence of minor mental health problems and may contribute to physical ill-health (Lambert et al, 2004).

Michie and Williams (2003), in a systematic review of literature (1987 to 1999) focusing on the relationship between work factors and psychological ill health among health care workers in the UK, health care workers in other developed countries, and non-health care workers. They revealed in the UK, factors associated with psychological ill health in doctors, from junior to senior grades, are long hours worked,

high workload and pressure of worked and lack of role clarity. Among UK nurses and student nurses, the most frequently reported sources of psychological ill health was workload pressures and low involvement in decision making and use of skills, and low social support at work. Similar factors are associated with psychological ill health in health care workers in the rest of Europe, the USA, and Australia. This review of studies also showed that levels of psychological ill health are higher in health care than in non-health care workers.

With regards to additional causative psychosocial factors, health care provision is associated with high levels of emotional burden (Janiszewski Goodin, 2003; Bakker et al, 2000; Aiken et al, 2001; Le Blanc et al, 2001) and is accordingly, characterised by a high risk for stress. For example, healthcare staff are often required to respond to a variety of psychological issues presented by patients and their families (Russell 1999), and are called on to provide 'life-saving' treatment, as well as information, reassurance and emotional support (Le Blanc et al. 2001). The frequency and intensity of these highly demanding workplace interactions present considerable emotional burden (De Rijk et al. 1998, Bourbonnais et al. 1999),

Overall, findings strongly support the contention that work as a healthcare provider in the NHS exposes staff to generic work-related psychosocial determinants of stress, and also additional occupation specific psychosocial factors, which taken together, makes the NHS a potentially very stressful environment in which to work.

Having determined what the likely causative factors of stress are to be for physiotherapists and occupational therapists and what resources are likely to be engaged to counteract them, the following section will now take a more in-depth look at these factors. These include: demands, work organisation and content of work, interpersonal relationships and leadership, individual-work interface. This section will also take a look at the potential effects of psychosocial work-related stress on health.

2.1.4 Work-related demands

Work-related demands refer to the degree to which the working environment contains stimuli work which require sustained behavioural, physical, cognitive and emotional effort. In the right circumstances demands can be good; they can be challenging, provide stimulation and growth and stimulate the utilisation of worker's skills and abilities. However; demands lead to negative consequences if they require additional effort beyond the usual way of achieving work goals (Dollard et al, 2003).

Work-related demand was one of the first psychosocial work-related factors to receive attention (Kornhauser, 1965; Stewart, 1976) and is now believed to be one of the most important in the field of psychosocial work environment research (Kristensen et al, 2004). This importance is reflected by the central role afforded the concept of 'demands at work' amongst the most influential occupational stress models such as, the Demand-control-support Model, and the Model of Effort-Reward Imbalance. All of which focus on the balance or imbalance between demand at work and other factors such as personal resources; social support; coping strategies and decision latitude (Kristensen et al, 2004).

Karasek (1979) defines work demands as "work-load demands, conflicts or other stressors which place the individual in a motivated or energised state of 'stress'" (p.287) and as the "psychological stressors involved in accomplishing the workload, and stressors related to unexpected tasks" (p.291). French et al (1970, 1974) expand upon the concept and divide work demand into two distinct constructs, these being: Quantitative demand and Qualitative demand. Cox et al (2000) define quantitative demand as being the amount of work embarked on by an employee, whist qualitative demand is defined as the difficulty of the workload undertaken. These constructs are independent, for example it is possible to have work which is characterised by quantitative overload and qualitative underload, and furthermore both

constructs are regarded as potential sources of workplace stress (Cox et al, 2000)

An individual faces quantitative overload when the quantity of work to be performed exceeds his/her capabilities. Basically it means having too much work to do in a given time frame. (Cox et al, 2000). Whereas boredom, lack of challenge and routine work have been identified as potential causes of quantitative underload. Both quantitative overload and underload are linked to stress, and job dissatisfaction amongst employees (Glazer & Gyurak, 2008; Carayon & Alvarado, 2007)

Individuals are in a qualitative work overload situation when they doubt that they possess the necessary knowledge, skills or capabilities to carry out their job-related responsibilities. Qualitative underload on the other hand, occurs in circumstances of status incongruity, when an individual is denied the opportunity to use their skills such as, under-promotion and frustration at having reached career upper limit, or pursue possibilities for personal development. Qualitative work overload and underload are both source of work-related stress.

Work demands have, for many years been consistently identified as a major source of stress and work-related ill health in numerous work environments including health care settings, (e.g. Demerouti et al. 2000; Stordeur et al, 2001). For example, McVicar (2003), in a review of nursing research relating to the causative factors of stress in UK nurses found 'work demands' to be the most pervasive causal predictor of stress. Michie and Williams (2003), found among UK nurses, the most frequently reported source of psychological ill health was workload pressures and Healy and McKay (2000) found workload to be most significantly correlated with mood disturbance. However, Payne (2001) did not find a significant relationship between workload and burnout (closely related to the experience of stress), although levels of burnout in her study were lower than in related studies. The reasons for this variation are unclear, but seem likely to include differences of stress

'hardiness' (Simoni & Paterson, 1997), of coping mechanisms (Payne, 2001), of age and experience (McNeese- Smith, 2000) or of the level of social support in the workplace (Healy & McKay, 2000).

There exists strong evidence within the literature to suggest that quantitative and qualitative job demands are linked to stress, less recognition however, is given to the emotional demands of work, and demands for hiding emotions as a potential determinents of work-place stress. Mann and Cowburn (2005) report that workers employed in jobs characterised as having a high emotional demand have been found to experience higher levels of stress than other workers. Emotional demand refers to the sustained effort that is required through professional contact with other people. Relating therapeutically with patients can be a source of professional fulfilment, for example when care can be personalised as a result of knowing the patient. However, relating to patients can be emotionally demanding as healthcare professionals encounter human vulnerability, suffering, pain, fragility, anxiety and even death. Interpersonal contact with patients may challenge an employees sense of competence and control because often there are no clear answer to patients expressed concerns (Stein-Parbury, 2005).

The extent to which a healthcare professional becomes burdened through the therapeutic relationship is dependent both on clinical context and the level of interpersonal involvement. For example, Stein-Parbury, (2009) talking about nurse – patient interaction describes the process by which the relationship can become emotionally burdensome for the nurse, says patients will reveal themselves to nurses selectively and some relationships will progress to deeply moving levels, while others remain therapeutically superficial. Some patients will require direct aid and assistance managing their lives and others will need information and advice in order to cope with challenges relating to their health. Still others may simple need support and comforting understanding. Each has a different level of involvement and

commitment and the more involved and committed the nurse becomes the more emotionally demanding they may find the relationship

Responsibility for others has long been established as a potential source of stress associated with various negative psychological and physiological ill-health outcomes (Wardell et al, 1964; French & Caplan, 1970; Cooper & Kelly, 1984; Sutherland & Cooper, 1986; McLeod 1997)., and health care provision is associated with high levels of emotional burden as a consequence of responsibility for others (Janiszewski Goodin, 2003; Bakker et al, 2000; Aiken et al, 2001; Le Blanc et al, 2001). The effect of stressed employees caring for vulnerable individuals was looked at by Hannigan et al (2000) who found that amongst 300 community mental health nurses in Wales; half were over-extended and highly emotionally exhausted. Further, they found that one in seven nurses experienced little or no satisfaction or sense of achievement in their work, whilst one in four admitted to negative attitudes toward those in their care.

Morita et al (2004) conducted a large (n=3187) questionnaire survey of emotional burden of nurses in palliative sedation therapy. The primary aims of this study were to clarify the levels of nurses' emotional burden, and to identify the factors contributing to the burden levels. Morita and colleagues found that although nurses were generally comfortable with the medical practice of palliative sedation therapy, a significant number of nurses felt serious emotional burden, to the extent that thirty per cent reported that they wanted to leave their current work situation due to their experience of burden. This study demonstrated that nurse-reported emotional burden was significantly associated with work-related factors of: workload, efficiency of team approach, experience in conflicting wishes for sedation between patient and family, nurses' skills and beliefs about sedation, nurses' general coping with patient death, and nurses' personal values. Alongside establishing the potential for emotional burden as a consequence of palliative nursing, this finding is consistent with reports that have identified factors relating to the

intrinsic content of work and those to do with the social and organisational context of work as general stressors for health care professionals.

McGrath et al (2003) report the results of a study of occupational stress undertaken with a large sample (n=171) of Northern Ireland nurses, including qualified staff (both community and hospital based) up to and including sister/charge nurses. This study formed part of a wider interprofessional study of nurses, social workers and teachers. McGrath et al., state that it is notable how small a percentage of nurses reported significant stress levels from emotional demands and direct contact with patients (27%), a finding in contrast to those from social workers and teachers (48% and 32% from social workers, and 47% and 46% from teachers) respectively. The results also show differences in responses between hospital and community based staff, with direct contact with patients and the emotional demands of patients causing community-based nurses more stress, and the hospital-based nurses showing more stress from contact with other professionals and imposing controls which curtail or restrict the personal autonomy of patients. McGrath et al., suggest that nurses are avoiding emotional demands of patients, by enlisting a coping mechanism specific to nursing, which is to unconsciously reduce stress in their job by setting nursing objectives as physical objectives in their job. They state that this may be the single most important finding of their study.

The extent to which health care provision is associated with high levels of emotional burden is it seems inconclusive. It can be said however; that responsibility for others is a potential source of stress.

In interactions with others on in the workplace, employees often have to conceal, suppress, or change the emotions that they feel in the process of doing their work. Sloan (2008) refers to this as emotion management and suggests that it is performed in most types of workplace interaction. Employees who interact with customers, clients or patients perform

emotion management as a part of their jobs while other workers manage their emotions around co-workers or superiors in response to expectations regarding emotional expression within the workplace or occupation, or norms of deference paid to higher status others. Manns and Cowburn (2005), suggest that there are many occasions when employees' 'genuinely felt emotions' are not in accordance with the expectation of their job and as a consequence emotional dissonance and subsequently emotional labour are experienced. The concept of emotional labour is defined by Brotheridge and Lee (2003), as the effort involved when employees regulate their emotional display in an attempt to meet organisational based expectations specific to their role.

Although the role of emotional experiences in our physical and psychosocial well-being has long been recognised it has only recently received consideration within the broader framework of organisational behaviour (Brief and Weiss, 2002; Barsade et al., 2003). Individuals holding jobs involving emotional labour have reported both work-related stress and emotional exhaustion (Brotheridge & Lee, 2002; Erickson & Ritter, 2001; Glomb et al, 2004; Grandey, 2003). For example, Rutter and Fielding (1988) in a study of prison officers found that a perceived need to suppress emotion in the workplace was positively associated with high levels of stress. And a recent quantitative review of emotional labour (Bono and Vey, 2004) indicates that it is associated with poor physical and psychological health.

While evidence suggests that emotional experiences at work (such as emotional labour) may have psychological effects on employees, the precise relationship between emotion in the workplace and psychological well-being is unknown (Sloan, 2008).

An emerging theme within environmental psychology argues that environmental conditions encountered in the workplace (both sensorial and physical such as: crowding, noise, air pollution, or ergonomic problems) can affect an individuals ability to perform and as such

represent work-related demands linked to the outcome of stress (Shoaf et al, 2001). For example, the European Agency for Safety and Health at Work[14] states that noise in the work environment can be a stressor, even at quite low levels. Leather et al, (2003) conducted a study on the interaction of noise with psychosocial job stress on 128 office workers employed by a government agency in a city in the Midlands region of the UK. The results showed no direct effect of ambient noise levels upon job satisfaction, well-being or organisational commitment. However, lower levels of ambient noise were found to buffer the negative impact of psychosocial job stress upon these same three outcomes. Leather et al (2003) state that noise has the potential to be direct source of work-related stress in cognitively demanding work, involving complex tasks that require a high level of concentration. However, in most cases, noise will not be a single causal factor of stress. The extent to which noise affects workers' feelings of stress depends on a broad range of interrelated factors, including the nature of the noise, the kind of task to be performed and personal factors such as fatigue.

Mohamed Makhbul et al (2007) conducted a study to investigate ergonomics design on work stress outcomes on 35 manufacturing operators in one multinational electronic company. Ergonomics workplace design in this study included: work area design, acoustic, lighting, working hours and humidity level. The stress outcomes include: somatic complaints, fatigue, job dissatisfaction and intention to quit. Multiple regression analysis indicated that 62.9% of the variance in stress outcomes is accounted by the independent variables i.e., chair, work area, acoustics, lighting, working hours and humidity. Chair/office seating, working hours and humidity were found to have significant relationship with the outcomes of work stress, whereas work area design, acoustics and lighting, however were found not significant.

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[14] http://osha.europa.eu/en/topics/noise/index_html/problems_noise_cause_html

Stress in the workplace can have many origins or come from one single event and environmental conditions are thought by many to be important contributors to the outcome of stress (i.e. European Agency for Safety and Health at Work). Accordingly research into the possible relation between features of the working environment and the development of work-related stress are beginning to emerge.

To recapitulate, work-related demands refer to those aspects of work which require sustained behavioural, physical, cognitive and emotional effort. These can be positive in the right circumstances (e.g. utilising abilities), but if also elicit negative responses and consequently lead to work-related stress.

2.1.5 Work organisation

There is a growing understanding that work itself if it is poorly organised, it can cause or compound work-related stress. Two of the basic elements of work organisation are employee participation in decision-making and employee control over work.

Research on the consequences for employees of opportunities to participate in decision-making on the outcome of work-related stress extends back nearly four decades. However; research regarding the nature of employees participation in decision making is somewhat divided. Some researchers argue that worker participation is a positive experience for workers, since they are able to make decisions and develop skills. While others regard workers' opportunities to participate in decisions as a form of exploitation that results in increased work demands, more ambiguity and greater stress.

An example of such a debate relates to models of high-performance work systems (HPWS) utilised in industry (for example, lean production; an assembly-line methodology developed originally for Toyota). HPWS models propose that increased quality, productivity, and flexibility can

be obtained by making better use of employees, in particular, by transferring responsibility and decision making from administrative structures directly to employees. Such empowerment is said to increase job satisfaction (Swanepoel et al, 2003). In support of this proposition, theoretical and empirical studies have shown that the adoption of high-performance work practices has been found to increase employee satisfaction, esteem, and commitment (Freeman et al, 2000; Godard, 2001; Appelbaum, et al, 2000; Bailey, et al, 2001).

However, Chaudhuri (2009) states that recent studies and case studies tend to confirm that HPWS create an intensified work pace and work demands, but with only modest increases in decision making. Chaudhuri (2009) argues that decision latitude remains low and thus, such high-performance work can be considered to be predictive of work-related stress. Danford et al. (2004), in a case study of British aerospace workers, found that HPWS produced a number of negative impacts on the employees. For example, employee workloads increased, older workers complained about loss of job variation, worker stress levels rose, workers and managers especially came under increasing time pressure and this also had a negative spill-over into the workers home lives. Similarly, Kumar (2000) found a reduced quality of work-life, due to increased workloads, job insecurity, and a decline in the influence on the job and confidence in the management.

Thus a key proposition posed by models of HPWS is that by increasing employee responsibility and decision making, employees become more empowered, and this will subsequently have a positive impact on their experience of work and work-related performance. But equally it seems, this method of working can produce higher levels of burden, stress, and have a negative impact on workers home-life balance. This has been shown to have the potential to diminish both workers' satisfaction with work and employee motivation to continuously improve performance.

The Job Demand/Control model (JDCSM: Karasek, 1976) maintains that an employee's degree of control over their work is central in

determining whether the experience of high work-related demand has a positive or negative influence. There exists considerable empirical support for this model (Schnall et al, 1994; Theorell et al, 1998; Belkic et al, 2000; Amick et al, 1998). However, Neufeld and Paterson (1989) argue that decision latitude – employee control is not, as always implied, at all times beneficial to employees. They write that the demand involved in making choices to effectively manage situations can itself be a potential source of work-place stress.

van der Doef & Maes (1999) conducted a review of twenty years of research concerning the Job Demand-Control Model (JDC). Their review included 63 samples published from 1979 to 1997. The conclusions from this review suggest that two hypotheses dominate the research in this area, namely the strain hypothesis and the buffer hypothesis. According to the strain hypothesis of the JDC model, employees working in a high-strain job (high demands-low control) experience the lowest well-being. The buffer hypothesis states that control can moderate the negative effects of high demands on well-being. Shen & Gallivan (2004) conducted an empirical test of the Job Demand/Control model among IT users, examining the antecedents, moderators and consequences of IT related workplace stress. Their results highlight the fact that negative consequences, such as stress are not directly linked to antecedents (such as job demands or workload), but rather are moderated by the level of autonomy/control that employees experience in their work. This is consistent with Karasek's model, specifically with what van der Doef and Maes (1999) labelled the "buffer hypothesis" which refers to the role of autonomy/ control in buffering or reducing the negative consequences of heavy job demands.

Interestingly, the research suggest significant implications for employees given that participatory control over conditions that affect them, has the potential to affect the outcome of stress experienced as a consequence of work. Employee participation in decision-making and

employee control over work may directly predict stress, and/or might moderate the negative effects of high demands on well-being.

Changes in work organisation and the ways in which work is carried out bring a need for development and growth of workplace knowledge, skills and competencies. Cooper et al (2001) write that issues relating to possibilities for development within an organisation are often cited as major sources of dissatisfaction and work-related stress. Cooper et al (2001) maintain that generally stress is experienced as a consequence of lack of opportunity for development. As well as providing opportunities for development, evidence suggests that learning at work ought to empower employees with more control to identify their own learning needs. For example, Paulsson et al (2005) conducted a study based on the control-demand-support model and found that increased employee control of the learning process makes competence development more stimulating, is likely to simplify the work and reduces stress. Paulsson et al (2005) conclude that it is therefore important that learning at work allows employees to control their learning and also allows time for the process of learning and reflection.

Cartwright and Holmes (2006) state that whereas in the past, individuals expected employers to provide the opportunity for skills development which would lead to job advancement within their existing organisation, they are now provided little in return other than simply a job or employability. As a consequence, many employees have experienced a sense of loss due to the deterioration of mutual commitment and trust between the individual and the organisation. It is suggested that as a result of these changes in the workplace, individuals are becoming increasingly frustrated and disenchanted with work. According to Flade (2003) over 80% of the UK workforce are currently lacking any real commitment in their work.

Organisational commitment is generally regarded as a psychological state characterising an employee's relationship with the organisation

that has implications for the employee's decision to remain or leave the organisation. Furthermore, this form of commitment reflects the employee's acceptance of the goals of the organisation and willingness to engage in behaviours that are specified in the job description, as well as those that are considered to be beyond the job expectations (Meyer & Allen, 1997). In recent years, there has been a growing interest in the relations between organisational commitment of employees and their experiences of work-related stress. Various studies have found that stress had a negative influence on organisational commitment (i.e. Hogan et al, 2006; Lopopolo, 2002), whereas Jepson and Forest (2006) found the relationship between perceived stress and occupational commitment to be negative.

Besides main effects of organisational commitment on stress, two competing hypotheses have postulated moderating effects of commitment on the relationship of work stress to measures of stressors. According to the first hypothesis highly committed employees experience the adverse effects of stress more than less committed employees, whereas according to the second hypothesis commitment operates as a buffer in the stressor-stress relationship. Schmidt (2007) found after analysing data from 506 employees of a municipal administration, that his results provided evidence in favour of the buffer hypothesis. The effects of high stress on the burnout dimensions of exhaustion and depersonalisation were reduced with increasing commitment to the organisation. Lu et al (2007) conducted a questionnaire study on 258 public health nurses (PHNs) in Taiwan. Analysis utilised structural equation modelling (SEM). The purpose of this study was to assess both direct and indirect relationships between professional commitment, job satisfaction, and work stress. The results of the structural equation model demonstrate a significant, direct, and positive effect of professional commitment on job satisfaction, as well as a significant inverse influence of job satisfaction on work stress. An indirect effect of professional commitment on work stress through job satisfaction was also revealed in the findings. The findings of the study

show that professional commitment plays an antecedent role to job satisfaction and work stress of nurses. This study suggests that professional commitment is an important factor related to work stress.

While the links between work organisation and stress are becoming evident, the problems of work organisation are not ones that can be simply or easily addressed. With more traditional health and safety issues it is possible to place exposure limits on a potential stressors and thereby reduce the problem. The resolution of many of the problems relating to work organisation however, requires more than finding a safe way of doing a job. It will involve enabling the employee to have more control and greater degree of decision-making participation. Further research therefore, designed to increase understand of the way in which work organisation and stress are related is needed.

Of particular interest is likely to be work organisation in the NHS healthcare sector which, due to increasing modernisation allied to cost cutting and clinical service change imperatives, have led to the implementation of varying approaches to redesigning work organisation for many of its healthcare professionals. Although these changes are rooted in attempts to create an efficient healthcare service, research is required that focuses on the implications for employees from a work organisation perspective.

2.1.6 Interpersonal relationships, social support and quality of leadership

Interpersonal relationships, social support and leadership have all been examined as potential determinants of stressors, and as resources to counteract stress.

Ferrie et al (2002) describe a supportive working environment as "one where employees receive good support from both colleagues and supervisors (for example, colleagues and immediate line managers who

are willing to talk about work-related problems) and where employees receive clear and consistent information form their supervisors" (p.8). Cox et al (2000) write that the three most important interpersonal relationships within the work environment are those with supervisors, subordinates and relationships with colleagues. Indeed, Ball & Pike's (2006) survey of wellbeing and working lives of nurses in the UK, found that the factor most strongly linked to nurses' intention to leave was relationships at work. Moreover, the survey also found that the factor most strongly associated with nurse job satisfaction was manager support.

Social support is commonly regarded as affecting the outcome of stress in three distinct ways. The first main effect is one where a negative inverse relationship is assumed, wherein an increase in support is directly associated with reduced stress irrespective of the number or intensity of stressors encountered (Shirey, 2004). Social support is also consider to be a mediating variable, whereby upon encountering a stressor the individual is motivated to utilise their support resources, which as a result reduces the amount of stress experienced (Cooper et al, 2001). Finally social support is thought to play a moderating role in the relationship between stressors and the stress outcome. As a moderator social support is believed to reduce overall stress experienced because support functions to help individuals cope with job demands and associated problems (Cooper et al, 2001).

The 'stress-buffering hypothesis' is a well known theory that ascribes a moderating role to social support. The hypothesis theorises that it is the level of support an individual makes use of which effects the relationship between the stressor and the stress outcomes such as well-being. As such, an individual who experiences good social support will experience less stress than those who do not. Cox et al (2000) write that social support and social relationships are for the most part viewed as playing a moderating role. However, Shirey (2004) in a review of literature relating to work-place social support for nurses concluded that

there is evidence to support the main, moderating and mediating effects of social support in the workplace. Viswesvaran et al (1986) conducted a meta-analytic study of previous work and found that social support had a threefold effect on the experience of work related stress. They found that support reduced the levels of stress experienced; mitigated perceived stressors; and moderated the stressor-stress outcome relationship.

As significant members of the work environment, supervisors have a direct influence on subordinate behaviour (Kozlowski & Doherty, 1989). As such, supervisors may either increase stress (e.g., through using excessive control) or they can prevent stressors or facilitate coping with stress (Shirey, 2004; Cooper et al, 2001). According to Bass (1992), different types of leadership are needed for different types of stress. For instance, providing support should theoretically be related to, or buffer the effects of social stressors. In a similar vein, initiating structure, which is concerned with defining roles and attaining goals, should theoretically reduce role stressors. An intervention study involving training supervisors to clarify subordinate roles supports this proposition, as the intervention was found to reduce role ambiguity (Schaubroeck et al, 1993).

In contrast to supervisor behaviours that may be thought to alleviate stress, research on supervisor behaviours that might be considered more negative (e.g., those that focus on mistakes subordinates make) has shown positive associations with self-reported stress (Stordeur et al., 2001). Stordeur et al (2001) found that in a study of nurses, having a head nurse who continuously monitors subordinate performance in anticipation of mistakes, and those who intervene to detect mistakes after the fact, were associated with higher levels of emotional exhaustion in nursing staff.

Further, research on abusive supervisor behaviours has shown that public criticism, loud and angry tantrums, rudeness, coercion, publicly

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ridiculing and blaming subordinates for mistakes they did not make (Bies, 2001; Tepper et al, 2001), yelling, and bullying (Burton & Hoobler, 2006) are all forms of abusive supervision. Research indicates that abused subordinates are less satisfied with their jobs (Tepper et al, 2004), less committed to their organisations, and more likely to display turnover intentions than non-abused subordinates are (Zellars et al, 2002). Abusive supervisor behaviours have also been argued to be detrimental to personal outcomes, such as low self-esteem, high frustration, helplessness, work-family conflict, and work alienation among subordinates (Ashforth, 1994; Tepper, 2000).

Overall, studies suggest that effective leadership is an important part of an employees psychosocial work environment. It is associated with better performance, job satisfaction and can prevent stressors or facilitate coping with stress (Loke, 2001; McNeese-Smith, 1995; Shirey, 2004). Finally, the importance of effective leadership is reinforced when it is revealed that many studies have concluded the opinions of the employees' immediate supervisor has more impact on the employee than overall company policies or procedures (Fletcher, 2001; Friedrich, 2001; Janney et al., 2001; Kleinman, 2003; Krairiksh and Anthony, 2001; Wynd, 2003).

2.1.7 Role in organisation

Work-related stress as a consequence of occupational role is a well researched area of occupational psychology. Role stress is widely conceptualised as the disparity between an individual's perception of their role expectations and what is actually being accomplished within the role (Lambert & Lambert, 2001).

Two facets of role stress that receive particular attention in the research literature are role ambiguity (a lack of clarity regarding a particular role) and role conflict (competing or conflicting role demands). These constructs were first defined by Kahn et al (1964) and have since

prompted a substantial body of research evidence that suggests both constructs are significant predictors of work-related stress (e.g. Fitzgerald et al, 2006; King & King, 1990; Schwab et al, 1983). Typically, the role ambiguity and role conflict constructs are discussed together.

A related, but separate issue is role incompatibility. This occurs where there are multiple and contradictory expectations on the role holder (Willcocks, 1994). This is a particular concern across the NHS, where diverse professional groups with different cultures interact to achieve goals or when healthcare professionals have the competing and sometimes incompatible responsibilities of manager and clinical provider (Fitzgerald et al, 2006). Role incompatibility is one of the several causes of role overload. Role overload is caused by an excess of roles or differences in expectations which lead to a highly demanding workload. Role overload has been associated with increased stress and decreased job satisfaction in acute and primary care (Pearson et al., 2004).

2.1.8 Work-individual interface

Over the past two decades, a leading business practice has been often-repeated rounds of downsizing and restructuring (also referred to as reorganisation, and various other euphemistic terms) by large private and public sector employers. Frequently associated with other practices such as outsourcing, privatisation, and the increased use of temporary workers, downsizing/restructuring has increased the level of job insecurity among employees' as well as leading to changes in work processes (including work intensification and multi-tasking) and management behaviour. As a consequence, De Witte (2005) suggests that it ought not to be surprising that job insecurity has become a sizeable social phenomenon.

Job insecurity or 'the threat of unemployment' is defined in various ways in the literature. In this thesis, job insecurity is defined as the perceived threat of job loss and the worries related to that threat (Severe, et al, 2004). This definition is closely related to the common denominator of most definitions in this field: the concern regarding the future continuity of the current job (e.g. Sverke & Hellgren, 2002).

Along with being considered a work stressor in various theoretical models of work psychology (e.g. Karasek & Theorell, 1990; Siegrist, 1996; Warr, 1987), an extensive body of research exists that documents the negative consequences of job insecurity for individual employees (e.g. De Witte, 1999; Nolan, et al, 2000; Sverke & Hellgren, 2002; Sverke et al., 2004). Research first of all shows that job insecurity correlates consistently with a lower score on various indicators of well-being at work, especially job satisfaction (Ashford et al., 1989; Davy et al., 1997; Rosenblatt et al, 1999). Parallel to this finding is the finding of higher burnout scores among the job-insecure (e.g. Dekker & Schaufeli, 1995). Next, research also shows that general indicators of psychological well-being (e.g. Büssing, 1999; Hellgren et al., 1999) and life satisfaction (Lim, 1997) are lower amongst job-insecure workers. In other research (e.g. Burchell, 1994; Hartley et al., 1991; Landsbergis, 1988) an increased level of irritation and anxiety, and of psychosomatic as well as physical complaints (varying from increased blood pressure to heart disorders) are added to this list. Finally, job insecurity also emerges as a chronic stressor (van Vuuren, 1990). Therefore, it is not surprising that by consensus, job insecurity is regarded as having a negative impact on employees' health and well-being.

Research has consistently shown that job satisfaction is negatively related to job insecurity (Sverke et al., 2002). Many different definitions of job satisfaction have been used, most of which generally consider job satisfaction as being the feeling an employee has about their job. The definition preferred in this thesis is given by Mosadeghrad (2003) cited in Rad and Yarmohammadian (2006:xii), who defines job satisfaction as

being "an employee's affective reaction to a job, based on a comparison between actual outcomes and desired outcomes".

Research on the relationship between job satisfaction and work-related stress in the main indicates a relationship in which an increase in job related stress is accompanied by a decrease in job satisfaction (Miles et al 1996). Job satisfaction has been found to have a major influence on job-related behaviours such as absenteeism, intention to leave and self-reported job performance (Nagy, 2002). Dissatisfied workers have been found to experience work-related problems and to lack concern for their work, whereas satisfied workers have been found to be committed to both their jobs and organisations (Gruneberg, 1979).

Oswald & Gardner (2001) report that job satisfaction levels in the UK are high, and similar findings were published by the report 'Joy of Work' (Work Foundation, 2004) which found that two thirds of UK workers report that they are satisfied or very satisfied with their work, although the same report also shows that 15% of employees (equates to over 4 million employees) said that they were dissatisfied or very disappointed with their work. Conversely, Faragher et al (2006) write that there exists evidence to suggest that current trends in employment conditions, such as long working hours and inflexible and automated working practices, may be eroding levels of job satisfaction.

McGrath et al, (2003) state that research repeatedly shows that healthcare professionals such as nurses, report lower levels of job satisfaction than is often reported for other professions and organisations. The RCN survey of the wellbeing and working lives of nurses in 2005, At breaking point? (Royal College of Nursing, 2006) involved a survey of 4000 nurses across the UK. The survey looked at exposure to stressors at work, and found that nurses experienced more stress than the general working population, measured by Health and Safety Executive (HSE) stress standards. This was related to issues such as, work demands, control over their work and relationship with

colleagues. Crucially, low scores on the HSE stressors scales were found to be associated with lower levels of job satisfaction and a greater intention to seek other work. Whereas, a the results of the 2008 national NHS staff survey show high, and rising, levels of job satisfaction.

The literature appears therefore, to paint two pictures. On the one hand research such as the 'Joy of Work' report (2004) propose that British employees are satisfied with their employment, whereas on the other hand, research as cited by Faragher et al (2006) suggests that levels may be falling. And with regards to the public sector, the national NHS staff survey (2008) reports high levels of job satisfaction across NHS occupations whereas, The RCN survey (2006) state that the nursing profession fairs worse than other workers for work-related stress and subsequently overall job satisfaction.

2.1.9 Coping with work-related stress

The study of coping is fundamental to understanding how stress affects people as the way in which people cope can significantly increase or diminish the effects of stress (Skinner at al, 2003). Research into the field of coping has generated a great deal of theoretical and empirical information, however, instead of clarity this abundance of work has given rise to a fragmented body of knowledge and a lack of agreement regarding how individuals cope or the factors important to coping. (Fugate et al, 2008; Folkman & Moskowitz, 2004). There is little doubt that despite a lack of agreement the increasing volume of research represents the mounting belief that coping is an important element in the stress process (Skinner et al, 2003).

Similar to the concept of stress a variety of definitions of coping have been proposed. Traditional approaches define coping as a stable trait or behavioural characteristic, though this conceptualisation is strongly debated with contemporary perspectives arguing that dispositional definitions of coping do not take into account the dynamic and process

orientated characteristic of coping and neglect the situational context in which coping behaviour occurs (Cooper et al, 2001).

Contemporary theories conceptualise coping as part of a transactional process involving an individual's dynamic interaction between themselves and their environment (Cooper et al, 2001). For example, the transactional perspective describes coping as the thoughts and actions generated by an individual to alleviate a problematic situation. Coping is not regarded as a fixed attribute, but rather as a dynamic ability to apply appropriate methods to manage or prevent stress. As a process, coping involves an individual's appraisal and responses, which are understood to be changeable as not every situation requires the use of identical responses. In effect, contemporary transactional approaches consider the coping process to be the management of responses and not mastery over stimuli (Cooper et al, 2001).

The transactional model of stress also views coping as a moderating variable between environmental conditions and individual reactions (Lazarus and Folkman, 1984). For example, according to this approach, increased work demands may lead to an individual working harder to achieve required goals which in turn reduce the amount of stress associated with the initial demand. Consequentially, the transactional model suggests that within the context of research paradigms it is more constructive to measure coping behaviours rather than style or personality (Cooper et al, 2001). Critics of this model argue that research of this type may be unsuitable for providing the level of analysis required to facilitate our understanding of work-place factors that impact on the well-being of the vast majority of the working population (Breif & George, 1991).

Cooper et al (2001) suggest that doubt exists amongst researchers as to the applicability of the transactional model of coping to the work-place, contenting that very little conceptual justification is provided in such 'coping as a moderator' research, which they argue functions to

undermine the value of such findings to the body of coping knowledge. Cooper at al (2001) explains that moderators are stable dispositional or environmental factors that are brought to the individual-situation transaction and buffer the stressor-strain relationship, whereas they argue, mediators are generated within the transaction and are critical to a given relationship. Fugate et al (2008) argue that as such when coping is hypothesised as a moderator, researchers are actually addressing a stable coping disposition of style, and in contrast when coping is presented as mediator researchers are addressing context dependant coping strategies.

The literature does in fact strongly support coping as a mediator of the stress- strain relationship (Cooper at al, 2001). Most recently, Fugate et al (2008) in an examination of different theoretical perspectives and models found that coping with organisational change is a completely mediated process represented by a stimulus response theoretical structure, in which coping was found to mediate the appraisal-emotion relationship.

Welbourne et al (2007) argue that it is not viable to categorise coping strategies into "right" or "wrong" ways to deal with stress, although some strategies do often seem more adaptive than others. Problem focused coping has consistently been related to lower perceived stress, physical health and general well-being (Welbourne et al, 2007; Mantler et al, 2005; Park & Adler, 2003). Problem-focused coping includes all activities (cognitive and behavioural) performed by an individual to control a situation. It is a coping strategy that enables the individual to retain control and tackle the problem 'head on'. Research has shown that problem-focused coping is negatively related to symptoms of stress and is therefore thought to be an effective coping strategy (Chang et al, 2006).

Chang et al (2006) in a study of the relationships among workplace stressors and coping methods in nurses, found that mental health

scores (SF-36) were lower for nurses who used escape-avoidance and emotion-focused coping, whereas the more frequent use of problem-focused coping responses were associated with improved mental health. They suggest their findings support a proposition that nurses coping responses should be shifted toward problem-focused coping. Nurses, they argue, should adopt coping responses that address workplace stressors rather than their own internal responses to stress and they suggest beneficial ways of doing this would be for nurses to utilises responses such as attempting new ways of doing things, attempting to persuade others into useful action, giving and receiving support form co-workers and seeking ways to improve workplace procedure.

The health-related effects of different coping styles have recently been examined. Overall, problem-focused coping is related to lowered incidents of illness, emotional exhaustion, and depersonalization, greater feelings of personal accomplishments and work satisfaction (Chang et al, 2006; Lambert et al, 2004), and stronger feelings of self-efficacy and mastery (Greenglass, 1995). Some research reports that males are more likely to use problem-focused coping and females more likely to use emotion-focused coping (Trocki & Orioli, 1994; Vingerhoets & Van Heck, 1990), but other research finds no gender differences (Hamilton & Fagot, 1988).

Avoidance coping includes tactics aimed at escaping from or disengaging from a stressful situation, either emotionally or behaviourally (Welbourne et al, 2007). For example, in relation to a burdensome workload, if employing avoidance type coping, an individual might either avoid strategies to reduce the workload or try to avoid the thought of how detrimental this workload is to their experience of stress. In general a reliance on avoidance type coping has been associated with more negative outcomes (Levin et al 2007).

Mantler et al (2005) examined coping with stress associated with employment uncertainty and found the relationship between employment uncertainty and stress was related to the extent to which individuals endorsed avoidance type coping strategies. Specifically, when such strategies predominated, individuals reported high levels of stress, irrespective of how certain or uncertain they felt about their employment status. Healy and Mckay (2000) examined relationships between nursing work-related stressor and coping strategies as well as their effect on job satisfaction and mood disturbance. The use of avoidance coping was found to significantly predict mood disturbance. Similarly, Lambet et al (2004) looked at work-place stressors and ways of coping as predictors of physical and mental health amongst nursing staff and found escape-avoidance coping to correlate with reduced mental health. Consequently, it is reasonable to suggest that the use of avoidance coping is generally related to higher perceived stress and is of a potential detriment to health.

Emotion-focused coping refers to the adaptation and mental effort expended by the individual in order to deal with or accept a problematic situation and resulting emotional disturbance. Research has shown that positive emotion-focused coping strategies are beneficial ways of coping with stressful events (Worthington & Scherer, 2004) with positive affect being related to the use of positive re-appraisal (Tugade and Fredrickson, 2007). However, additional findings indicate that emotional coping is negatively associated with job satisfaction (Greenglass, 1993) and that negative emotional coping strategies such as wishful thinking and self blame are positively associated with psychological distress, such as job anxiety and depression (Greenglass, 1993).

Although there is no consensus within the literature, it is generally accepted that in the majority of stressful situations an individual will employ various types of coping strategy (Cooper et al, 2001). In summary, coping is recognised as an important element of the overall stress process, but it is further acknowledged that despite many years

of research no consensus has been reached as to the definition and taxonomy of coping.

2.1.10 Effects of psychosocial work-related stress on health

Over the last two decades there has been a mounting belief that the experience of stress at work is associated with both physical and psychological ill-health outcomes. In many cases however, whilst challenging employees' coping mechanisms no long term or lasting ill-health is caused, though in circumstances where exposure is prolonged ill-health is a potential outcome. Research to date has not established a direct causal link, but extensive research does indicate an indirect relationship between psychosocial work-related stressors and ill-health (psychological and physical), with employees of the NHS being found to be particularly vulnerable to the ill-health effects of stress, compared to the general population.

A systematic review and meta-analysis on work stress in the etiology of coronary heart disease (CHD) by Kivimäki and his colleagues (2006), found 11 independent studies examining the job-strain model, four studies examining the model for effort–reward imbalance, and two studies examining the organisational injustice model. The results showed a 43% excess risk[15] for CHD among employees with high job strain. For effort–reward imbalance and organisational injustice, the excess risk was 58% and 62%, respectively. Kivimäki and his co-workers concluded that observational data suggest an average of 50% excess risk for CHD for employees with work stress. Other research has shown that organisational changes, such as downsizing and mergers, are associated with an increased risk of death from cardiovascular disease, as well as with heightened morbidity and disability retirement among the remaining employees (Vahtera et al, 2004; Vahtera et al, 2005; Westerlund et al, 2004). The excess risk is

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[15] Excess risk is a measure of the association between a specified risk factor and a specified outcome (such as contracting a disease).

partially attributable to an elevated level of work stress after such changes (Kivimäki et al, 2000).

Siegrist & Rödel (2006) reviewed 46 studies published since 1989 on the associations between psychosocial stress at work and health risk behaviour in particular, cigarette smoking, alcohol consumption and being overweight. The review suggests that at least some part of the burden of disease attributable to a health-adverse psychosocial work environment is explained by an unhealthy lifestyle, in particular in relation to alcohol consumption, overweight, and cigarette smoking. Siegrist & Rödel (2006) conclude that work stress increases the probability of a co-manifestation of several risk factors in the individual, thus predisposing them to chronic disease development.

To elucidate the associations between psychosocial work stressors and mental ill health, Stansfeld and Candy (2006) conducted a meta-analysis of psychosocial work stressors and common mental disorders using longitudinal studies identified through a systematic literature review. They found that job strain, low decision latitude, low social support, high psychological demands, effort–reward imbalance, and high job insecurity predicted common mental disorders. Stansfeld and Candy (2006) conclude that this meta-analysis provides robust consistent evidence that (combinations of) high demands and low decision latitude and (combinations of) high efforts and low rewards are prospective risk factors for common mental disorders and suggests that the psychosocial work environment is important for mental health.

Many studies have investigated the effects of stress on NHS staffs' health and well-being and within this body of research there is agreement that work-related stress is detrimental to the quality of health-professionals working lives and increases the incidence of minor mental health problems and may contribute to physical ill-health (Lambert et al, 2004). The recent interim NHS Health and Wellbeing report (Boorman, 2009) in which over 11,000 staff completed

questionnaires, found that stress, musculoskeletal problems and mental health difficulties were the most common problems suffered by NHS employees. The review highlights that the NHS loses over 10 million working days each year due to sickness absence alone. Annual NHS sickness levels of 10.7 days a year per employee are higher than the public sector average and 50% higher than the private sector at 6.4 days and nearly a quarter of all NHS staff absence is due stress, depression and anxiety.

Conversely, psychosocial work characteristics have also been found to have protective effects on mental health. The Whitehall II study (Stansfeld et al, 2000) found that social support and control over work had a protective effect on mental health functioning and were associated with reduced sickness absence. In further studies of both cross-sectional and longitudinal design, levels of social support from colleagues and supervisors, and high levels of decision latitude have been found to have protective effects and even promote employee mental health (Mausner-Dorsh & Eaton, 2000; Weinberg & Creed, 2000; Niedhammer et al, 1998; Warr, 1990; Parkes et al, 1994).

2.1.11 Theoretical Models of Work-Related Stress

Clearly research has established a link between certain work-related psychosocial factors and the experience of stress. However work-related stress is a complex and overdetermined issue; illustrated by the fact that there remains a lack of consensus with regard to what actually constitutes work-related stress.

There are many theoretical approaches to work related stress such as, the stimulus-based approach; the response based approach; and the psychological approach, each constructed to specify which factors are important and for what reasons, and to describe, explain and predict the relationships that link potential determinant to the outcome of stress. There is however; amongst the work-related psychology literature a

growing consensus as to the efficacy of the psychological approach to conceptualising work-related stress (Cox et al, 2000).

The psychological approach to work-related stress defines it as a 'negative psychological state with both cognitive and emotional components which is part of and reflects a process of interaction between the worker and their workplace environment' (Cox et al, 2000). The move towards a consensus regarding the efficacy of the psychological approach to conceptualising work-related stress has served to illuminate and clarify (by organising, and thus simplifying) previously scattered observations about work-related stress. For example, Kahn and Byosiere (1992) observe that the many different psychological theories and models share core features. They suggest these are that the different frameworks require the stress process to involve a series of events that include a) the presence of a demand, b) a set of evaluative processes through which the demand is perceived as challenging, and c) the elicitation of a response that normally affects the well-being of the individual. It is shared core features such as these that add the much needed clarity and coherence to the concept of work-related stress.

There exists as yet no one consensually accepted theory and many theories and models are informed by the psychological perspective. Within this following section four of the most significant models will be considered:

1. The Job Characteristics Model (JCM)
2. The Job Demands-Control Model (DC)
3. The Effort-Reward Imbalance (ERI) Model
4. Job Demands Resources (JDR) Model

This selection of models is not exhaustive, nor does this section intend to be a critical review, but rather it aims to highlight a number of

common features that reflect the domain in which psychosocial work-environment research takes place.

The Job Characteristics Model

The Job Characteristics Model (JCM: Hackman & Oldham, 1976) is an important and extensively studied model of motivational job design (Fried and Ferris, 1987; Loher et al, 1985; Taber & Taylor, 1990). The JCM describes the relationships between core job dimensions, critical psychological states and personal and work outcomes, such as motivation and job satisfaction; employee work effectiveness; absenteeism and turnover (Kompier, 2003). In effect the model is detailing the main features of job design which affect employee attitudes and behaviour.

The JCM predicts that five core job dimensions (skill variety; task identity; task significance; autonomy; and feedback from job: Hackman & Oldham, 1976) impact on work outcomes through their effects on three psychological reactions to the job, referred to in the model as 'critical psychological states'. These are: experienced meaningfulness of work; felt responsibility; knowledge of results (Hackman & Oldham, 1976). Jobs that are characterised as having a high component of the five core dimensions are predicted to be associated with increased job satisfaction; high internal work motivation; high quality work performance; and low absenteeism and labour turnover (Wall et al, 1978). Further, the process is predicted to be moderated by 'growth need strength' and therefore the process is predicted to be stronger for those employees motivated to learn and grow on the job (Panzano et al, 2004).

The following hypotheses are derived from the Job Characteristics Model:

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1. Jobs higher in skill variety; task identity; task significance; autonomy; and feedback will create a greater experience of meaning, responsibility and knowledge.

2. Increase in meaning, responsibility and knowledge will in turn create greater job satisfaction, higher work motivation and better work performance, lower levels of absenteeism.

The JCM is, as mentioned previously, an important and influential model within the field of occupational psychology, and as such has generated a substantial volume of research. A criticism of JCM research is the narrowing of focus to the five job characteristics in the model (Wall and Martin, 1987). In defence of the model, Fried and Ferris (1987) conclude, that on the whole their extensive research and literature review corroborates the model's hypothesis that job satisfaction, higher work motivation and performance are greater among workers who perceive their jobs as being characterised by the five core job characteristics. In further agreement, Belison et al (2005) writes that the majority of published work supports the validity of the JCM. The model retains an prominent status within the field of occupational psychology.

The Job Demands-Control Model

Originally developed by Karasek (1979), the job demand-control model (JDC) is one of the most influential models in occupational health psychology research. The JDC Model builds upon the approach established by the Job Characteristics Model and embodies an interactional approach to the concept of work related stress. It focuses on the structural or organisational aspects of the work environment and the worker's interaction with these aspects (Cox et al, 2000).

The initial model developed by Karasek (1979), focuses on two independent work-place dimensions. The first is labelled as 'job demand' and refers to workload factors such as 'time pressures' and 'role conflict'. The second dimension is alternatively referred to as 'job

control' or 'decision latitude' and refers to an individual's ability to control their work-related activities. In its original format the JCM model predicts that stress is caused by an interaction effect between 'high job demands' and 'low decision latitude'. If on the other hand however, the employee's job is characterised by 'high decision latitude' along with 'high job demands', their experience of work-related stress will be reduced (Cox et al, 2000).

Since the development of the original model, House (1981) established that social support has the potential to buffer the effects of high work demands. In consideration of this, the JDC was later extended by Johnson and Hall (1988) to include social support as a third dimension. This addition resulted in the expanded version of the JDC model, referred to as the Demand-Control-Support model (JDCS).

The following hypotheses are derived from the Job-Demand-Control-(Support) Model:

1. A combination of high work demands and low control (and inadequate social support) will result in a 'high strain job' and increase the risk of stress and stress-related health problems.

2. A combination of high work demands and high control (and high social support) will lead to active jobs that provide the opportunity for the development of skills, confidence, competence and well-being.

Empirical testing of this model has dominated occupational stress research over the last two decades and considerable empirical support for the model has been found (Schnall et al, 1994; Theorell et al, 1998; Belkic et al, 2000; Amick et al, 1998). Dollard (2001) writes that the model attracts strong empirical support and has good face value in the workplace. Interestingly however she concludes that modern work demands are squeezing out "passive" jobs (i.e. researchers increasingly having to compete for funding) which may lead to two classes of

occupations: those with high control or those with low control, but all with high demands. Criticisms of this model relate to its comparative simplicity and predictability, and its disregard of psychological processes (Dollard, 2001). However Kompier (2003) actually attributes the popularity of the model to its simplicity. Aditionally, Dollard (2001) suggests that one reason the model is predominant in occupational stress research is probably due in part to the ease with which the highly specified three dimensions of the model can be researched.

The Effort-Reward Imbalance Model

The Effort-Reward Imbalance model (ERI: Siegrist, 1990) employs a transactional theory of stress. The model focuses on the cognitive processes and emotional reactions associated with the worker's interaction with their environment. The model gives emphasis to work-place restrictions and employee coping resources in addition to the social structure of the job (Cox et al, 2000).

According to the ERI model, workplace stress is defined as a mismatch between 'high costs spent' and 'low rewards received'. The model suggests that workers expend effort at work and expect as part of a socially negotiated process, sufficient remuneration in the form of money, esteem and status control (Cox et al, 2000). For example, workers who experience high job demands and low pay or job insecurity, are experiencing a mix of extrinsic work-place conditions that will predispose them to the experience of work-related stress. Alongside the extrinsic situational factors (i.e. job demands) the ERI model identifies an intrinsic personal motivational variable (over-commitment); high levels of which are believed to aggravate the 'effort-reward' imbalance.

The following hypotheses are derived from the Effort-Reward Imbalance Model:

1. A combination of high effort and low reward (non-reciprocity) increases the risk of emotional distress (strain) and a decline in health over and above the risk associated with each one of the components independently.
2. Overcommitted people are at greater risk of experiencing high strain and a decline in health.
3. People characterised by conditions 1 and 2 are at greater risk of ill-health.

Empirical evidence to support the ERI model is mounting. Studies to date have found that the effort-reward imbalance in the work-place is related to higher risk of cardiovascular disease; gastrointestinal disease; sickness absence; subjective health complaints; and psychiatric disorders (DeJonge et al, 2000; Siegrist & Peter, 2000; Marmot et al, 1999; Siegrist, 1996, 1998, 2000; Siegrist et al, 1990). One important criticism of the model is made by Dollard (2001) who writes that the development of personal attributes such as over-commitment cannot be ruled out as developing independently of exposure to the work environment. Kompier (2003) however, concludes that empirical evidence indicates that the ERI model provides a constructive framework for investigating work-related stress.

Job Demands Resources Model

The Job Demands Resources Model (JDR; Demerouti, et al., 2001; Schaufeli & Bakker, 2004) has recently been developed to meet different deficits of earlier research models such as the Job Characteristics Model (JCM; Hackman & Oldham, 1976), the Job Demands Control Model (JDC; Karasek, 1979); the and the Effort Reward Imbalance Model (ERI; Siegrist, 1996). These models have been criticised for being to be too simplistic, since they only consider a restrictive set of job characteristic important to predict employees' well-being. Within the JDC for example exclusively work pressure, skill utilisation and decision authority are regarded as vital (Karasek, 1979).

The JCM on the other hand considers skill variety, task identity, task significance, autonomy and feedback important for employees' well-being. Although their restrictive view contributes to the specificity of these models, it also comprises their validity, as work related well-being is found to be influenced by various job characteristics (e.g., Lee & Ashforth, 1996). The JDR was developed to overcome this shortcoming and includes a variation of job characteristics aimed at reflecting the complex work environment in today's labour market, without neglecting the need for specificity (Bakker, Dermeouti, Taris, Schaufeli, & Schreurs, 2003).

The JDR's proposes that job characteristics can be classified into the two overarching categories of job demands and job resources. Job demands are those aspects of the work context that require psychical effort or continuously tax employees' affective and cognitive psychological capacities and therefore are associated with certain psychological costs. Job demands can be determined by work tasks (e.g., task interruptions; Bakker, Demerouti, & Schaufeli, 2003), job (e.g., work load, role ambiguity; Schaufei & Bakker, 2004); interpersonal relationships (e.g., emotional dissonance; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) and the organisation (e.g., physical demanding work environment; Bakker, Demerouti, de Boer, & Schaufeli, 2003). Job demands do not necessarily have to be detrimental. When they remain between certain proportions or only occur in certain circumstances, job demands even might contribute to employees' well-being (Warr, 1987). When they exceed (quantitatively or qualitatively) employees' adaptive capacities, these demands become stressors and lead to psychological and physiological costs (Hakanen, Bakker, & Demerouti, 2005).

Job resources are those aspects of the work context that buffer job demands and reduce their physical and psychological costs, and are functional in achieving work goals and stimulating personal growth, development and learning (Demerouti, Bakker, Nachreiner, & Schaufeli,

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2001). Job resources are thus valuable in buffering the negative consequences of job demands and are also important for employee's well-being. Like job demands, job resources can be located on the level of the organisation (career opportunities, job security; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), the social level (e.g., supervisor support; Bakker, Demerouti, & Schaufeli, 2003) and at job level (e.g., autonomy, participation in decision making; Bakker, Demerouti, de Boer, & Schaufeli, 2003) or tasks (e.g., feedback, skill utilisation; Bakker, Demerouti, Taris, Schaufeli, & Schreurs, 2003).

The second basic assumption of the JDR is that both job demands and job resources independently influence work related well-being. Whereas the presence of job demands and the absence of job resources are hypothesised to increase employees' stress or ill-health, the presence of the latter is predicted to promote employees' well-being. Researcher have provided evidence for these theorised relationships. Schaufeli and Bakker (2004), for example, have demonstrated that the presence of demands (i.e., work pressure) and the absence of resources (i.e., social support) predicted burnout. The presence of job resources in contrast, was predictive for job engagement. Similar results have been obtained with job demands as emotional and physical demands, and autonomy, skill utilisation, feedback and task variation as job resources (e.g., Hakanen, Bakker, & Schaufeli, 2006).

A study among employees of an institute for higher education provided support for the buffer hypothesis of the JD-R model (Bakker et al., 2005). The study showed that high levels of workload, emotional demands, physical demands and work-home interference did not result in high levels of exhaustion and cynicism if employees experienced adequate levels of autonomy, received feedback and social support, or had a high-quality relationship with their supervisors (Büssing and Höge, 2004)

In conclusion, Kompier (2003) suggests that it is the similarities amongst the predominant theories of work-related stress that allow us to conclude that if work provides the right mix of work-place characteristics (these being: high but not too high demands, skill variety, autonomy, social support and feedback, task identity and nominal job ambiguity) work can be a positive experience that stimulates an employee's motivation and promotes good mental health as well as productive performance.

2.2 Literature Review

Following section will review research specific to the National Health Service (NHS) followed by research conducted with physiotherapists and occupational therapists working within the NHS.

The contention that stress within the NHS is a major workplace issue is not arguable; literature on work-related stress within the NHS is both extensive and consistent in revealing that Stress has become one of the biggest causes of staff sickness and costs the NHS millions of pounds every year. Coupled with this, the Health and Safety Executive recognise that working within the NHS, will always hold potential for stress within the workforce and has consequently classified stress as a workplace risk falling within the scope of Health and Safety legislation, the requirements of the Health and Safety at Work Act and the Management of Health and Safety at Work Regulations.

The scarcity of research specific to physiotherapists and occupational therapists within the NHS means that it is useful to look at research designed to establish a comprehensive picture of local as well as national NHS working environments and to identify and/or corroborate common determinants' of work-related stress across health care professions. The following section will therefore, briefly consider two of the most recent large scale studies of work-related stress in the NHS.

In 2007, in what is believed to be the largest annual staff survey in the world staff (National Survey of NHS Staff, 2007[16]), 156,000 employees from all 391 NHS trusts in England, were surveyed about their views and experiences of working for the NHS staff surveyed, included those working in: mental health and learning disability trusts; ambulance trusts; primary care trusts; and acute trusts. Interestingly physiotherapists' and occupational therapists' collectively represented only 5% of the overall sample, unfortunately however; findings from the survey are presented for the NHS as a whole and profession specific findings are not included in the report.

The survey found that almost a third (33%) of staff reported they suffered work-related stress within the last year; an identical outcome to that of the 2006 survey, representing a decline from 39 % in 2003. Job satisfaction is reportedly high for most staff and similar to levels of recent years. This, the report suggests, is partly due to satisfaction with the high levels of support that most staff get from their work colleagues (75% of staff were satisfied or very satisfied), as well as satisfaction with the amount of responsibility they are given (68% were satisfied or very satisfied), and the opportunities to use their skills (64% were satisfied or very satisfied).

Two-thirds of NHS staff (66%) reported that they work more than their contracted hours in an average week and when asked about the amount of pressure they were under at work, more than four in 10 staff reported that they could not meet all the conflicting demands on their time at work (42%) or did not have time to carry out all their work (47%). These are similar findings to those reported in the 2005 and 2006 surveys. While half the staff (52%) reported that they had adequate materials, supplies and equipment to do their work, only one in four (26%) felt that there were enough staff at the trust for them to do their

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[16] Can be viewed at: http://www.cqc.org.uk/redirection.html

jobs properly. These two questions were not asked in the previous surveys.

A large minority of staff were found to be seriously considering leaving their jobs, a consistent finding across the past three annual surveys. About a third (36%) said that they often thought about leaving their trust, about one in four (24%) thought that they would probably look for another job within 12 months, although fewer than one in five (18%) wanted to leave as soon as they could find another job.

The survey found generally high level of support, guidance and feedback on their work, was received from immediate managers. 71% of respondents agreed that their immediate manager encouraged them to work as a team, and similar proportions felt that he or she was supportive in a crisis (71%) or could be counted on to help with difficult tasks (67%). Just over half of staff (51%) felt their immediate manager asked for their opinions before making decisions that would affect their work (51%), and a similar proportion (53%) said their manager gave them clear feedback.

With regards the extent to which NHS staff felt they had clear goals in their jobs, were given clear feedback on their performance and were given the opportunity to participate in decision making, the survey found 78% of respondents reported to always know what their responsibilities were, with 62% agreeing that they had clear goals and objectives. However, only around half felt that they were either involved in (48%) or consulted over (48%) decisions that might affect their work area, team or department, and only a third (32%) said that they received clear feedback about how well they were doing. Nevertheless, only 26% agreed that they often had trouble working out whether they were doing well or poorly in their job. These findings have not significantly changed over the past three years of the survey.

With regards job satisfaction, three-quarters of staff (75%) reported satisfaction with the support they got from their colleagues, and around two-thirds were satisfied with the amount of responsibility they were given (68%), the opportunities they had to use their skills (64%), and the freedom they had to choose their own methods of working (61%). However, only 39% of staff reported themselves to be satisfied with the recognition they received for their work, only 26% were satisfied with the extent to which their trust valued their work, and 29% were satisfied with their level of pay.

This survey is cross sectional in nature which limits the potential to draw conclusions about causal relationships. This is because cross sectional studies measure exposures and outcomes at the same point in time, and thus cannot prove that exposure preceded and therefore leads to outcomes. However the study is important in that is provides an overview of how NHS employees perceive their work and working environment.

The results demonstrate a significant proportion of NHS employees perceive themselves to be experiencing work-related stress and describes a collective working environment characterised by heavy workloads and high demands on the job, and real or perceived lack of control concerning decisions relating to the job. Alongside demanding however, work roles are clearly defined and experienced by the majority as rewarding. Moreover, the work environment is supportive and consequently, as suggested by the authors, a determinant in the high levels of job satisfaction.

The second large scale survey of recent times "At Breaking Point" (commissioned by the Royal College of Nursing, 2005) was a self-report questionnaire survey of 6,000 members throughout the UK designed to explore nurses' wellbeing and working lives. It was found that more than half of the nurses in the survey described their jobs as very stressful

and that nurses are exposed to higher levels of work related stress compared to the average reported by the HSE.

The survey demonstrated that a relationship exists between the exposure to stressors (as measured by the seven HSE scales) and the likelihood of respondents reporting that they find their job stressful. The survey found that this was particularly the case in relation to work-related demands. It was also found that perceived stress is itself a predictor of job satisfaction, and that both stress and job satisfaction (separately and together) are predictors of nurses' desire to leave their current jobs – people who are more stressed are more likely to want to leave, regardless of their overall job satisfaction.

One in five respondents indicated that they experienced health problems or disabilities that they expect to last more than a year. These nurses were found to be more likely to respond negatively on the HSE Stress Management Standards in relation to demands, manager support, peer support, relationships at work, and change. In particular, this was the case for manager support. For example, only 37% of respondents think that their manager supports them through emotionally demanding work, compared to 50% of nurses without health problems/disabilities.

Nurses who intend to leave their current nursing position in the following year (2006) were found to have higher stress scores on all variables. The variable most strongly linked with intention to leave was relationships at work.

As with the previous survey, a self-report measure was employed as the means of data collection, so this RCN survey is answerable to the usual criticisms of this method for example, that self report measures taken on a single occasion may be bias because of a respondents' temporary mood state. However, Dollard et al (2003) argue that the most sensible approach to self reporting is to assume that it is likely to

be a valid unless the respondent has reason to mislead, or there is reason to believe that judgement is impaired (say through drug or alcohol use).

Evidence from the above studies show that significant numbers of NHS employees experience high levels of stress. Moreover, both surveys offer clear support for the proposition that despite the occupation and location of work 'core stressors' are widely reported by NHS employees; and as the RCN survey suggests these stressors are potential determinants of stress. The RCN survey suggests significant negative impacts of work stress on the individual (both physical health impacts and disabilities) and the organisational level (e.g. intention to leave). Of course, it is not possible to know from this cross-sectional study whether the work environment has adverse health effects, or whether workers with specific health problems are more susceptible to workplace stress.

Interestingly, results from both surveys suggest that the working environment of the majority of NHS employees is perceptually characterised by good co-worker and supervisor support. The evidence further suggests that employee perceptions of co-worker involvement and supervisory support can reduce stress and/or increase job satisfaction.

In summary, there is clear support for the proposition that in the public sector heath care professions are high risk occupations for work stress and that stress as a consequence of work is associated with a range of poor health and organisational outcomes. And moreover, perceptions relating to the quality work based support are related to job satisfaction and reporting of stress. As such, the evidence is consistent with findings from across the accumulated generic occupational stress research, as well as the numerous smaller scale research studies conducted with singular health professions within the NHS; along with core theoretical

predictions of psychological theories of work-related stress (e.g. Demand-control-support model).

Having looked at evidence from two large scale surveys in order to 'paint a picture' of the work and working environments of NHS employees as a whole, the following section reviews literature published over the last decade (1996 to 2006) relating to work-related stress and NHS physiotherapists and occupational therapists.

Databases searched included: Web of Science, Social Sciences Citation Index, Medline, PsycARTICLES, PsychINFO, CINAHL, AMED, PubMed, and ASSIA. Search terms for this study included physiotherapists, occupational therapists, Professions Allied to Medicine (PAMS), psychosocial, stress, stressors, work-stress and occupational stress, health, coping, National Health Service (NHS), and quantitative and searched as 'and' / 'or'. The database searches involved setting limiters to include the following: publications between 1996 and 2007, human respondents, English language and searching by all text and key words. Manual searches of reference lists of relevant articles were also conducted. Only studies which quantitatively analysed data and presented findings with respondents employed as qualified therapists' by the NHS were selected. Hence, studies using qualitative methodologies or samples that were not employed by the NHS were excluded. Articles obtained were then searched for further relevant studies.

The 1996 cut off date was used to ensure that the most recent literature was reviewed. The search was limited to NHS employees to ensure relevance to the context and aim of this study. Four quantitative research papers were located that in some way looked at work-related stress or potential stressors of therapists (CSP, 2004; Mandy & Rouse, 1997; Allan and Ledwith, 1998; Leonard & Corr, 1998).

In response to a resolution passed in 1995, at an annual Chartered Society of Physiotherapists (CSP) representatives' conference "to bring light to the true extent of stress in all tiers of the physiotherapy profession" (p.33 CSP, 2004), the CSP conducted a survey designed to provide an outline of the current situation regarding physiotherapists and work-related stress. The report (Published within: Employment Relations & Union Services: Health and safety – Workplace Stress. CSP, May 2004) states that due to literature on work-related stress revealing a consensus regarding potential stressors, an in-depth study aimed at establishing new information was not needed. Instead the CSP decided to conduct a short questionnaire survey to establish the prevalence, antecedents and impact of stress amongst PT's as a consequence of their work.

The survey was composed of ten questions designed to establish absolute and relative levels of stress (no explanation was given as to the working definitions of absolute and relative stress); causes and effects of stress; time off as a consequence of stress; and support and prevention measures available at work. The report does not discuss the process of question development, nor is information given regarding validation of the questionnaire. The survey reports a good response rate with 1300 CSP members completing the questionnaire. The report does not state the total numbers of questionnaires issued. Furthermore the actual number of completed questionnaires equates to only 4% of the CSP membership, which although a very small percentage is considered by the CSP to be representative of the total physiotherapist population.

The results found that two thirds of the respondents reported themselves to be experiencing high or very high levels of work-related stress and over half reported that their stress levels had increased within the preceding year. Excessive workload was identified by two thirds of the respondents as being their primary workplace stressor. Furthermore, one in eight respondents reported having taken time off

work due to stress and all reported having experienced ill-health such as, high blood pressure, headaches and anxiety, as a consequence of stress. With regards their social environment 87% felt that they received support for the experience of stress from colleagues, whilst only 9% reported the same of personnel departments and only 14% of senior management. Finally the survey revealed that approximately a quarter of the respondents had access to workplace counselling services, only 8% were aware of workplace stress policy and only 6% were aware of stress being included in risk assessment at work.

The outcomes of the CSP survey match closely those findings that comprise the existing body of evidence which illustrates that health professionals are vulnerable to high rates of work-related stress and stress related illness (HSE Survey [SW2007/08]; Neurolink, 2001; Weinberg & Creed, 2000). Workload issues are identified to be the greatest work-related stressors experienced by physiotherapists in this survey, with other significant stressors identified as being low decision latitude, poor management style and pay rates, all of which concur with previous healthcare sector research (Bennet et al, 2001; Kipping, 2000; Carson et al, 1995).

The second research study to investigate work-related stress amongst physiotherapists was conducted by Mandy & Rouse (1997). The primary aim however, of this survey was an investigation of 'burnout' (physical, emotional and mental exhaustion) amongst junior physiotherapists and the examination of stress was conducted only in terms of its relationship with the experience of burnout. Nonetheless, the study's methodology did include the application of a validated stress measure (Work Stress Inventory), unfortunately however, the outcomes of this measure are discussed only in terms of the correlation with the Maslach Burnout Inventory.

The study reports response rate of 52% with a small sample size of 31 respondents collected from across 23 hospitals. The study found

respondents to be experiencing the symptoms of emotional exhaustion and depersonalisation, both of which are indicative of burnout. Emotional exhaustion was significantly related to the number of stressors and quality of work, organisational issues, role issues and responsibility as measured by the Work Stress Inventory. Interestingly, the study also found that respondents had high scores on the measure of personal accomplishment, suggesting that physiotherapists are inclined to positively evaluate their achievements at work. It is unfortunate that the publication gave no further discussion as to the outcomes of the measurement of stress.

Allan and Ledwith (1998) conducted a survey to examine the relationship between self-reported levels of stress in senior occupational therapists and their perceived need for professional supervision and future job intention. The authors state that the conceptual framework for this study arose from the anecdotal evidence that senior occupational therapists may be leaving the NHS due to the lack of supervision (authors cite: Hawkins and Shohet, 1989) The study reports a response rate of 70 % with a sample size of 211 senior occupational therapists approached via the British Association of Occupational Therapy. The survey instrument was a multiple choice postal questionnaire. The authors make a statement about piloting of a preliminary questionnaire by conducting interviews with six OT's, which they write, resulted in the inclusion of additional questions. No information is provided about how the preliminary questionnaire was devised (i.e. was it theory based or devised from existing questionnaires etc), nor about the validation procedure. A further piloting phase is briefly explained to have been conducted with the aim of establishing methodological rigour, from which the authors concluded that the questionnaire was easy to complete.

Allan and Ledwith (1998) explain that the word 'supervision' was not used at all in the questionnaire in order to avoid the confusion of differing perceptions of what is meant by the word. They also state that

with regard to the assessment of level of stress, a choice of four (rather than five) responses to the question was given in order to avoid having a midpoint on the scale, which the authors argue would have represented an easy response option.

The study found that approximately one third of the respondents reported high or very high levels of stress and almost one fifth indicated their intention to leave their profession within five years. 75% of respondents indicated that they were unhappy with aspects of their supervision (the authors are not clear as to how they established this without explicit reference to 'supervision'); with only 25% indicating that they were happy with the level of professional supervision. Furthermore, the study found that respondents who were experiencing the highest levels of stress were more likely to indicate the need for more supervision.

A final phase of the study involved telephone interviews with 12 respondents, unfortunately details about what questions were asked and via what format (i.e. structured or semi-structured interview), are not given. Only the briefest of outlines is given about the outcome of these interviews and it would appear that they were conducted simply to confirm the outcome of the questionnaire results. It is reported that participants were asked to comment on what factors contributed to the lowering of their stress levels. All stated that support was very important. Some respondents are reported to have talked about peer support, others of managerial support and a support network. All stated that informal networks of support were probably more important that the formal in facilitating their ability to cope with everyday stressors encountered at work. The authors report that 11 of the 12 participants mentioned that pressure of work was a major contributing factor to the experience of elevated stress levels. The study does not elaborate on what OT's were referring to when they talked about 'pressure at work' nor does it explain how interviewees were determining a contributory factor to be major or not. No examples of interviewee data were given

to support the contentions made by the researchers so the reader is reliant on the say-so of the authors. Furthermore, no analysis was reported to have been conducted on the interview data.

Allan and Ledwith (1998) conclude that the survey indicated that time pressures and professional values and rewards are key components of OT's perceived levels of stress. They state that there was no clear indication that area of practice was related to level of stress. Finally, they conclude that their evidence does seem to suggest that OT's experiences of work-related stress and dissatisfaction with professional supervision may be contributing to the decisions made by experienced staff to leave their profession.

It is interesting to note that within the last ten years review orientated papers (collectively spanned 25 years of research literature) published in relation to stress amongst occupational therapists, are more prolific than empirical research. Five such review papers were identified (Lloyd & King, 2003; Edwards & Burnard, 2003; Rugg, 2002; Bassett & Lloyd, 2001; Sweeney & Nichols, 1996). The review papers collectively acknowledged the lack of research publications relating to work-related stress amongst British occupational therapists. As a consequence all widened their searches to include overseas publications. It should be noted that although overseas findings have the potential to inform the situation faced by UK occupational therapists, the fact that healthcare systems vary considerably country to country means that generalisations to UK OT's are limited.

A number of implications for occupational therapists become apparent from the conclusions made by these review papers. Occupational therapists, particularly working within the practice field of mental health (three of the five review papers focused on this field) are prone to work-related stress for a number of reasons. In particular the range of stressors extracted from both anecdotal and empirical studies include patient contact; staff shortages; the role, function and status of the

profession; and relationships between OT's and other healthcare professionals. Lloyd and Bassett (2001) posit that it is matter of concern that the most consistent reasons for work-related stress proposed by the more recent empirical studies, relate to the nature of the profession. They conclude that occupational therapists are disturbed by issues of professional worth and identity such as feeling undervalued by other healthcare professionals.

A decade ago Sweeny and Nichols (1996) concluded from a review of earlier research, that although occupational therapists experience stress associated with their work they are regarded as doing so to a lesser degree than other allied health professionals and mental health professionals. Sweeny and Nichols attribute this finding variously to methodological and measurement limitations and to the fact that OT's may be particularly skilled at protecting themselves from stressors. They cite a study by Rees and Smith (1991) which found that whilst OT's rated as one of the most pressured of all health service cohorts, they were one of the most adept at utilising positive coping strategies. In accordance with this finding Lloyd and Basset (2001) more recently concluded from their review of the research that the positive coping strategies employed by OT's may be central in reducing their levels of stress.

Lloyd and Basset (2001) further concluded that the existing research indicated that OT's positively evaluate their clinical practice; deeming such work to be effective and therefore of value. At the same time however, they experience anxiety about how they are perceived and valued by other healthcare professionals. Lloyd and Bassett (2001) state that on the whole OT's satisfaction with their work outweighs any anxieties associated with professional role, status and identity. Of overall importance however, is Lloyd and Basset's (2001) contention that despite the picture presented by existing research, there is in actual fact, not enough published research to enable conclusive

generalisations about work-related stress as experienced by UK occupational therapists.

Interestingly, despite differences in research aim and focus, the research does indicate that physiotherapists and occupational therapists are vulnerable to the experience of work-related stress. Findings suggest that stress experienced by therapists may be attributable to factors intrinsic to the job such as: high workloads (CSP survey, May 2004); responsibility (Mandy & Rouse, 1997); role-based stress (Mandy & Rouse, 1997); lack of support (CSP survey, May 2004; Allen & Ledwith, 1998), lack professional worth (Lloyd & Bassett, 2001). Whilst it is not possible to extrapolate sufficient data from the reviewed studies to make conclusive statements about the nature of work-place stress as experienced by therapists, it is clear that the results paint a familiar picture to that developed from the considerable volume of published work on work-related stress.

In conclusion, although the above studies suggest that stress as a consequence of work for therapists is potentially problematic, the overall paucity of studies means that no definitive conclusions or generalised statements about NHS therapists' experience of stress as determined by their psychosocial work environment can be confidently made.

2.3 Rationale for this study

Establishing the nature of psychosocial work-related stress for therapists is important for a number of reasons. Firstly, there exists already a substantial volume of work examining the causes of work-related stress amongst health care professionals such as nurses (McGown 2001; Stowder et al, 2001; Shader et al, 2001; Bratt et al 2000; Healy & Mckay 2000; Schmitz et al 2000; Kirkaldy & Martin, 2000; Demerouni, 2000). However, the extent of published research

specific to physiotherapy and occupational therapy is by comparison remarkably limited. Without research explicitly targeting these professions; whom are already identified as having one of the highest retention and recruitment problems in the NHS, the nature of their work-related stress remains unknown. Secondly the psychosocial working environment is an important component of the therapists' work experience, in view of the fact that alongside affecting their physical and psychological well-being, it has a potential to exert a direct effect on their clinical efficacy and professional growth.

Due to an emergent consensus within the literature on work-related stress regarding potential stressors, an in-depth study aimed at establishing new information regarding causation is not needed. Instead the study presented within this chapter is designed within a confirmatory framework to establish whether determinants of stress as a consequence of their work identified within the broader empirical literature are related to stress amongst NHS therapists.

2.4 Research Aims

This study aims to address the following: Whether a) core psychosocial stressors and b) structural and social resources to counteract stress (as identified by accumulated evidence in occupational stress literature and by consensus amongst the theoretical literature) are also determining factors for NHS therapists' self-reported experience of work-related stress. And c) to ascertain the relationship between work-related stress and therapists self-reported health.

2.5 Research Design

This study is a multi-site quantitative design. Data is to be collected through a self-report questionnaire survey to be completed by a sample of qualified physiotherapy and occupational therapists' employed by the NHS.

Decisions about how to collect information from therapists were based on the key requirement of how to access their own perceptions and experience of work-related stress in a straightforward and quantifiable way. Based on this requirement a self-completion questionnaire (COPSOQ) survey was selected as the most useful way to elicit this kind of information.

2.6 Selection of questionnaire (Copenhagen Psychosocial Questionnaire (COPSOQ))

Before choosing the COPSOQ questionnaire, several alternatives were reviewed for suitability. Among the main questionnaires were the Whitehall II questionnaire (Marmot et al, 2001), the Short Form-36 (SF-36) questionnaire (Ware et al, 1993), the Job Content Questionnaire (Karasek et al, 1998), and the Copenhagen Psychosocial Questionnaire (COPSOQ; Kristensen & Borg, 2000).). Among the reviewed questionnaires, only the COPSOQ met the requirements of this study. The COPSOQ is a standardised, well validated questionnaire and comprehensively includes most of the relevant dimensions according to several important theories on psychosocial factors at work. The others although very well validated missed some dimensions, such as emotional and cognitive demands, the meaning of work, job insecurity, job satisfaction, stress, and health, so were deemed too limited in scope for the purpose of this study.

The COPSOQ (Copenhagen Psychosocial Questionnaire) was developed and validated by Kristensen and Borg of the Danish National Institute for Occupational Health in Copenhagen (Kristensen & Borg, 2000). The questionnaire was aimed to be theory-based without being based on one specific theory. Therefore, the COPSOQ is covering a broad range of aspects of currently leading concepts and theories. The following are mentioned (Kristensen et al, 2005): "1. The job characteristics model. 2. The Michigan organisational stress model. 3.

The demand-control-(support) model. 4. The sociotechnical approach. 5. The action-theoretical approach. 6. The effort-reward-imbalance model. 7. The vitamin model." The COPSOQ tries to deal with the broadness of the construct "psychosocial factors" by applying a multidimensional approach with a very wide spectrum of ascertained aspects (Kristensen et al, 2005). Most COPSOQ questions were taken from already existing and well approved and validated instruments, for instance from the "Setterlind Stress Profile" (Setterlind & Larsson, 1995), the "Whitehall II Study" (Marmot et al, 1991), or the "Job Content Questionnaire" (Karasek et al, 1998).

The questionnaire was developed in three versions: A long version for researchers, a medium size version to be used by work environment professionals, and a short version for use within the workplace. The whole concept has been labelled by NIOH as the "the three-level concept". Table 2.1 shows the measures (scales) and number of questions of the Copenhagen Psychosocial Questionnaires used in this present study (long and medium versions). Most items are ordinal with five answer categories. In the Danish study the psychometrical qualities of the instrument have been tested on the basis of a representative sample of 1858 Danish employees (49% female, response rate 62%) between 20 and 60 years. The Danish authority for occupational safety has acknowledged the COPSOQ (short version) as an instrument to evaluate psychosocial work load.

Table 2.1: Measures and number of questions for the Copenhagen Psychosocial Questionnaire (COPSOQ: long version and medium version).

Measures (Scales)	Questions (N)	
	Long Questionnaire	Medium Questionnaire
Work-related Demands		
1. Quantitative demands	7	4
2. Cognitive demands	8	4
3. Emotional demands	3	3
4. Demands for hiding emotions	2	2
5. Sensory demands	5	4

Work organisation and content of work		
6. Influence at work	10	4
7. Possibilities for development	7	4
8. Degree of freedom at work	4	4
9. Meaning of work	3	3
10. Commitment to the workplace	4	2
Interpersonal relationships and leadership		
11. Predictability	2	2
12. Role clarity	4	4
13. Role conflicts	4	4
14. Quality of leadership	8	4
15. Social support	4	4
16. Feedback at work	2	2
17. Social relations	2	2
18. Sense of community	3	3
Work-individual interface		
19. Insecurity at work	4	4
20. Job satisfaction	7	4
Health		
21. General health	5	5
22. Mental health	5	5
23. Vitality	4	4
Stress		
24. Behavioural stress	8	4
25. Somatic stress	7	4
26. Cognitive stress	4	4
27. Sense of coherence	9	0
Coping		
28. Problem-focused coping	2	0
29. Selective coping	2	0
30. Resignation coping	2	0

Studies show that all versions of the COPSOQ have been particularly successful in providing valid assessments of a broad range of psychosocial work environment factors (i.e. Kristensen & Hannerz, 2002; Kristensen et al, 2003; Kristensen et al 2004; Ek et al, 2002; Borritz et al 2006; Pejtersen et al 2005; 2006; Nübling et al, 2006; Aust et al, 2007; Tsutsumi et al, 2007; Arvidson, 2008).

Aust et al (2007) conducted a study to validate the COPSOQ (version 1) as a suitable instrument to measure the psychosocial work environment of hospital employees. The sample consisted of 399

Danish hospital workers (nurses; lab technicians; midwives; nurse assistants; social workers; and administrative assistants). The psychosocial work environment was measured with the scales from the COPSQ covering the three main areas of demands at work, work organisation, and interpersonal relations at work.

Most of the scales were found to have satisfactory internal consistency (r > 0.70). The internal consistency for the dimension of 'demands for hiding emotions at work' was found to be unacceptable (r = 0.47). The authors attribute this to the differing focus of the two questions that compose the scale (which as such requires the respondent to shift focus from feelings to opinions). Importantly, the psychosocial work environment factors were found to be relevant to the hospital environment with scores on the scales between occupational groups showing distinctive differences in psychosocial work environment. For example, it was found that working in patient care when compared to lab work, was characterised by higher quantitative, emotional and cognitive demands; higher work pace; and more role conflict; whilst also better work organisation including more influence at work and better possibilities for development and a higher meaning of work. The authors concluded by stating that the COPSOQ (version 1) is a suitable instrument to measure the psychosocial work environment of different occupational groups within the hospital setting.

2.7 Pilot Study

The pilot study was the first step in defining the methodology and research design for this study. The aim of this pilot study was to test the study design with a small sample of potential respondents and to identify any methodological related problems. The pilot was an important step in planning and preparation before embarking upon the questionnaire survey study to be discussed in this chapter. Therefore the following sections will briefly summarise the design, procedure and

outcomes of the pilot study, as well as describing the impact the pilot had on the design of the main study.

2.7.1 Pilot study - Sample

A self report questionnaire (COPSOQ) was sent to qualified physiotherapists (n=25) and occupational therapists (n=25) all of whom were working within one local NHS trust hospital (chosen for convenience and subsequently excluded from the main study).

2.7.2 Pilot study - Measurement Instrument

The questionnaire to be sent to therapists was composed of the validated instrument: the Copenhagen Psychosocial Questionnaire – English Research (Version 1) (see table 2.1 for more detailed information regarding the composition of the measurement tool). Demographic information was to be collected on gender, age, and in addition job related information was to be recorded on grade and specialisation; academic level reached; length of time professionally qualified; location and type of organisation; full-time or part-time working; length in current position and length of time employed by the organisation in total.

2.7.3 Pilot study - Research Procedure

Following approval from a Multisite Research Ethics Committee[17] (MREC), a non-personalised invitation (via letter), was extended to physiotherapists and occupational therapists at their place of work along accompanied with a questionnaire pack.

The invitation letter to therapists outlined the aims of the survey and invited the recipient to participate by completing the accompanying questionnaire. The questionnaire pack contained a covering letter

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[17] MREC Reference Number: 04/Q2403/132. Dated: 20/09/04.

outlining the aims of the study with assurances regarding the anonymous, voluntary and confidential nature of the responses; a copy of the questionnaire; and a sealable envelope in which to enclose the completed materials.

The letters of invitation and questionnaire packs were delivered initially to the therapy department managers (who had previously in person agreed to disperse packs to all members of their staff). Managers were further contacted by telephone after delivery of the questionnaire packs to remind them of the importance of dispersing and returning the questionnaires.

Therapists were given a completion period of two weeks from the initial delivery date. Completed questionnaires were to be returned in the sealed envelopes to the various department reception desks and subsequently collected by the researcher. At this time a generalised non personalised letter was sent (via the hospital internal mailing system) to inform all therapists that if they have not already done so, they were still able to complete a questionnaire which will be collected by the researcher in a further week's time.

2.7.4 Outcome of Pilot Study

25 usable questionnaires were returned (n=16 physiotherapists and n=9 occupational therapists).

As stated previously, the primary aim of this pilot study was to test the research design and to identify any methodological related problems. There were two main potential problems highlighted as an outcome of the pilot study. The first being the response rate. As explained in the protocol, questionnaires packs were delivered to department managers for dispersal after which the managers were contacted directly by telephone to remind them of the importance of dispersing and returning the questionnaires. However, this indirect route of distribution meant

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that no control was maintained by the researcher over how many questionnaire packs were actually given out. Furthermore, questionnaires were returned by post anonymously, so the researcher was unaware of who had received and returned a copy; which made follow-up contact with non-responders problematic. On enquiry it was found that managers had relied upon therapists to collect a copy of the questionnaire for themselves, and it appears that either therapists were unaware of the request for them to do so, or their motivation was low. It was clear that further action was needed by the researcher to boost the response rate. It was decided that for the main study the researcher would need to retain control of questionnaire distribution and collection. In order to do so the researcher decided that questionnaire packs would be sent directly to therapists at their place of work.

The second main potential problem highlighted as a result of the pilot study was the length of the research questionnaire. On enquiry as to reasons for non-completion, therapists commented that the questionnaire was too long. They commented that on initial receipt, because of the number of questions and the overall bulk of the questionnaire, they believed that it would require a lot if time and effort to complete, which caused them to lose motivation to do so. To address this issue and improve the likelihood of a higher response rate, the researcher decided that it would be necessary to reduce the length of the questionnaire. It was determined that the work-environment professionals' version of COPSOQ (medium version) would be a comprehensive and validated alternative (see table 2.1), although in order to address all of the research questions, it would be necessary to retain the coping scales from the research version.

2.8 Main Study

2.8.1 Research Procedure

Permission to contact individual therapy staff was denied. Therefore the questionnaire packs were disseminated independently and voluntarily by department managers (as per pilot study); there was no control over the sampling frame. The response rate cannot be calculated for this reason also, since the number of employees who received this survey in totality is unknown.

Questionnaires packs (as per pilot study) were delivered by the researcher to department managers for distribution. Therapists were given a completion period of three weeks from the initial delivery date. The survey questionnaires (sealed within return envelopes to ensure confidentiality) were collected at the close of this date by the researcher from the department manager. One week from the initial collection a generalised follow-up reminder was sent to therapists via the department managers. This follow-up included a new cover letter that did not specify a target due-date, but instead stressed the importance of responding. Another copy of the questionnaire was offered at this time.

2.8.2 Sample

Questionnaire packs (as per pilot study) were sent to qualified physiotherapists (n= 100) and occupational therapists (n=100) working at four UK NHS Trusts (Five NHS hospitals across the Trusts participated – see table 2.2). Participating NHS trusts were chosen for their ease of access for the researcher, so were therefore located within the midlands and North West England.

The goal was to hand out as many questionnaires as possible and on the advice of Trust human resource departments, 40 questionnaire packs were sent to each Hospital: 20 to each PT and OT departments (n=200 in total). If questionnaires ran out department managers were

invited to ask for more. However, no requests for further questionnaire packs were made.

2.8.3 Measurement Instrument

The work-environment professionals' (medium) version of the COPSOQ (Kristensen & Borg, 2000) is the measurement instrument to be used in this main study, along with the coping scales from the research (long) version.

2.8.4 Statistical Analysis

Completed questionnaires were manually coded and response rates noted. Responses to questions were entered onto a Statistical Package for Social Sciences (SPSS v10) software.

Cronbach's α (alpha) was used as a measure of the reliability of items in the COPSOQ survey instrument (Table 2.3).

Descriptive statistics (Means, medians, standard deviations, and inter quartile ranges represented by box plots) were used to describe the main features of the data in quantitative terms. Mann–Whitney U tests (a non-parametric test for assessing whether two independent samples of observations come from the same distribution / are equal) were utilised to test significance. Whilst, Spearman's rank correlations (Spearman's rho: a non-parametric measure of statistical dependence between two variables) were used to assesses how well the relationship between two variables can be described.

2.9 Results

2.9.1 Descriptive demographic data
In Table 2.2 below the descriptive demographic data for respondents in this study is summarised.

Table 2.2: Sample descriptive of respondents.

	Mean	Range
Age (Years)	36	21 - 65
Time spent working in:		
Current position	4yrs	1 month to 25 years
Profession	11yrs	1 month to 45 years
NHS Trust	6 yrs	1 month to 14 years
	N	**%**
Gender:		
Female	166	93
Male	13	7
Profession:		
Physiotherapy	117	65
Occupational therapy	62	35
Hours worked:		
Full-time	116	64
Part-time	61	34
Qualifications:		
Higher degree	4	2
Undergraduate degree	103	58
Professional diploma	67	37
Not stated	5	3
Professional grade:		
Basic / junior	28	16
Senior 1	78	44
Senior 2	51	28
Superintendent 2	1	1
Superintendent 3	12	7
Clinical specialist	7	4
Not stated	7	4
Trust region:		
Nottingham	58	33
North Staffordshire	34	19
Mid Cheshire	31	17
Chester	27	15
Mid Staffordshire	29	16

Internal consistency of the COPSOQ measures was measured with Cronbach's alpha, a statistic calculated from the pairwise correlations between items. Internal consistency ranges between zero and one. George and Mallery (2003) provide the following rules of thumb: that an a of 0.6-0.7 indicates acceptable reliability, and 0.8 or higher indicates good reliability. The internal consistency for the measure of 'demands for hiding emotions at work' was found to be questionable (r = 0.59). Aust et al (2007) reported a similar finding (unacceptable internal consistency for the same measure). Aust (2007) and colleagues attribute this to the differing focus of the two questions that compose the scale (which as such requires the respondent to shift focus from feelings to opinions).

Table 2.3: Scales and number of questions and Cronbach's alphas for the Copenhagen Psychosocial Questionnaire (COPSOQ). (N=179 – 178 for the different scales)

Scales	Questions (N)	Cronbach's α
Work-related Demands		
1. Quantitative demands	4	0.80
2. Cognitive demands	4	0.86
3. Emotional demands	3	0.87
4. Demands for hiding emotions	2	0.59
5. Sensory demands	4	0.70
Work organisation and content of work		
6. Influence at work	4	0.83
7. Possibilities for development	4	0.82
8. Degree of freedom at work	4	0.68
9. Meaning of work	3	0.77
10. Commitment to the workplace	2	0.74
Interpersonal relationships and leadership		
11. Predictability	2	0.78
12. Role clarity	4	0.78
13. Role conflicts	4	0.72
14. Quality of leadership	4	0.93
15. Social support	4	0.74
16. Feedback at work	2	0.64
17. Social relations	2	0.65
18. Sense of community	3	0.80
Work-individual interface		
19. Insecurity at work	4	0.61
20. Job satisfaction	4	0.84

Health		
21. General health	5	0.75
22. Mental health	5	0.80
23. Vitality	4	0.80
Stress		
24. Behavioural stress	4	0.79
25. Somatic stress	4	0.76
26. Cognitive stress	4	0.85
27. Sense of coherence	0	0
Coping		
28. Problem-focused coping	2	0.75
29. Selective coping	2	0.61
30. Resignation coping	2	0.66

The results for this study are presented under the dimension groupings for the Copenhagen Psychosocial Questionnaire (COPSOQ); these are, demands; work organisation and content of work; interpersonal relationships and leadership; work-individual interface; health; stress; and coping.

The scales of the COPSOQ are formed by adding the points of the individual questions of the scales by giving equal weights to each question. In most cases the questions have five response options. In these cases the weights are: 0, 25, 50, 75, and 100. The scale value is calculated as the simple average. Thus, all scales go from 0 to 100. A respondent is considered missing if less than half of the questions in a scale have been answered. If a person has answered at least half of the questions, the scale value is calculated as the average of the questions answered.

High scores correspond to high values on the respective dimensions. Thus, a high score on quantitative stress means a high stress level, and a low score on influence means a low level of influence at work.

2.9.2 Demands

Response options and scoring for the COPSOQ demand measures:
Always (100), Often (75), Sometimes (50), Seldom (25), Never/hardly ever (0).

Table 2.4 illustrates descriptive statistics (medians and standard deviation) for all respondents per each measure of the 'demand' dimension. The results indicate respondents report that they 'often' experience 'quantitative demands', 'cognitive demands' and 'sensorial demands', as a consequence of their work. The findings also indicate that 'emotional demand' is experienced 'sometimes', together with the 'sometimes' 'demand for hiding emotions'. Figure 2.1 represents these findings via box plots which display median scores with interquartile ranges. It can be seen that there little or no variability in the distribution of respondents' scores on the measure of 'cognitive demand'. This suggests a strong degree of agreement amongst respondents' in the reporting and hence, belief that the requisite amount of cognitive skill or ability (such as having to remember a lot of things; making difficult decisions and being required to have a wide knowledge base) within the therapy professions is high (Mdn=75).

The results therefore; show that respondents self report high levels of quantitative demands (e.g. having to work very fast), cognitive demands (e.g. having to remember a lot of things), and sensorial demands (e.g. work requiring a high level of precision) and moderate levels of emotional demands (e.g. becoming emotionally involved in work), and demands for hiding emotions (e.g. having to hide feelings).

Table 2.4: Medians and standard deviations for measures of the 'Demand' dimension.

	Quantitative Demands	Emotional Demands	Cognitive Demands	Sensorial Demands	Demand for Hiding Emotions
N Valid	179	179	179	179	179
Missing	0	0	0	0	0
Median	75	50	75	75	50
Std. Deviation	17.79	18.96	17.02	18.79	29.13
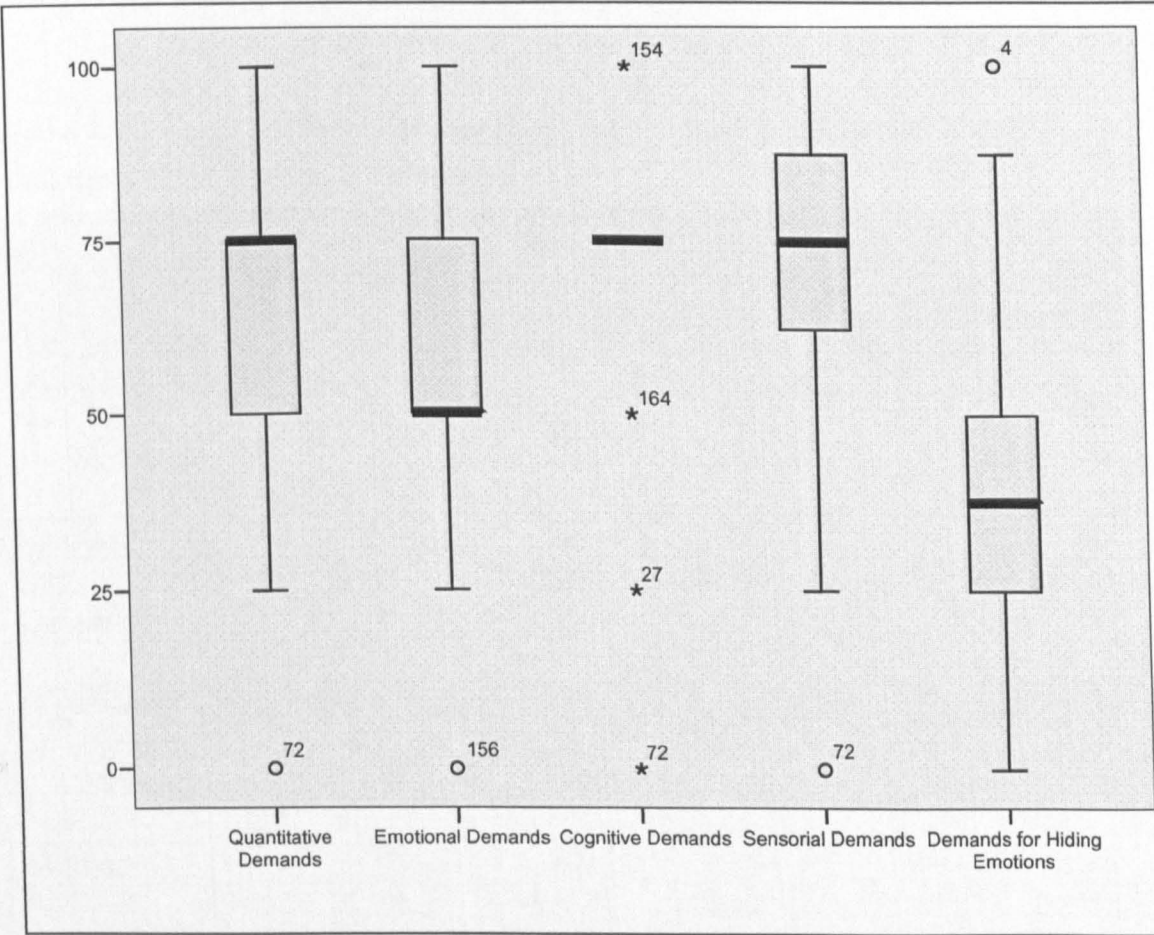
Figure 2.1: Box plots indicating median scores with interquartile ranges for measures of the 'Demand' dimension.

Table 2.5 shows median and standard deviation scores for measures of the 'Demand' dimension, for physiotherapists and occupational therapists, with the results of the Mann-Whitney U test of difference. The findings illustrate no significant differences in median scores between each professional group, suggesting that work-related demands are reported similarly by respondents from each profession. The results confirm that physiotherapists and occupational therapists

self report their jobs to be characterised by high 'quantitative demands', 'cognitive demands' and 'sensorial demands', with moderate 'emotional demands' and 'demands for hiding emotions'.

Additionally, figure 2.2 represents these findings via box plots which display median scores with interquartile ranges. For occupational therapists', there is little or no variability in the distribution of sores on the measure of 'cognitive demand'. This suggests a strong degree of agreement amongst occupational therapists.

Table 2.5: Descriptive and inferential statistics for each professional group for measures of the 'Demand' dimension.

	Quantitative Demands	Emotional Demands	Cognitive Demands	Sensorial Demands	Demands for Hiding Emotions
Occupational Therapists:					
N Valid	62	62	62	62	62
Missing	0	0	0	0	0
Median	75	50	75	75	50
Std. Deviation	14.61	19.95	14.29	16.78	28.33
Physiotherapists:					
N Valid	117	117	117	117	117
Missing	0	0	0	0	0
Median	75	50	75	75	35.5
Std. Deviation	19.31	18.45	18.32	19.84	29.59
Test of Difference between Physiotherapists and Occupational Therapists:					
Mann-Whitney U	3589.500	3410.000	3406.500	3512.000	3201.500
Z score	-.126	-.719	-.775	-.356	-1.319
Asymp.Sig. (2 tailed)	.900	.472	.438	.722	.187

99
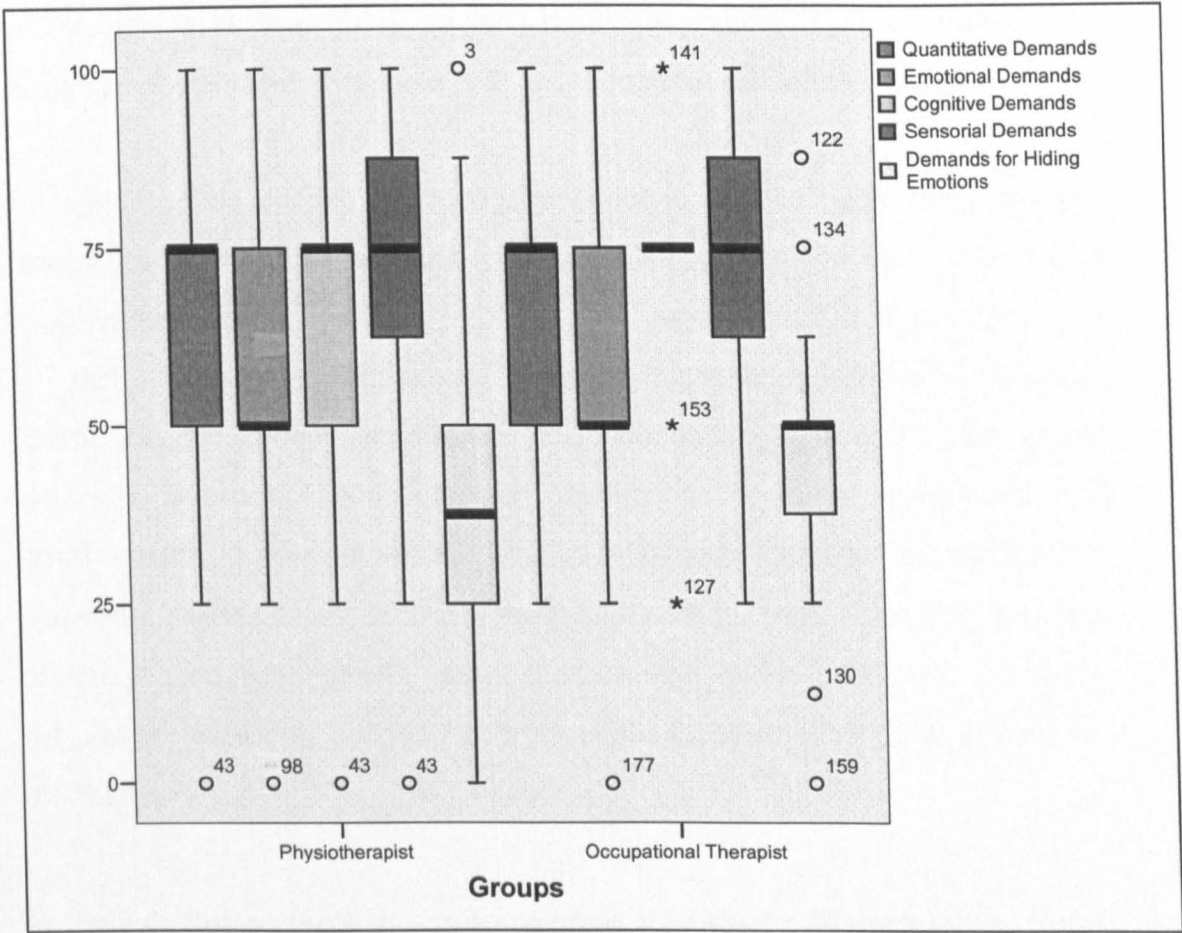
Figure 2.2: Box plots indicating median scores and interquartile ranges for both professional groups for each measure of the 'Demand' dimension.

Table 2.6 shows the Spearman's rho, non-parametric measures of correlation, for all respondents', between the measures for the dimension of 'demand' and the measures for the dimension of 'stress', an addition to the additional measure of 'total stress'. The table illustrates, for all professional groups, significant positive correlations were made between 'qualitative demand' and all three measures of the 'stress' dimension and the 'total stress' measure (Behavioural stress, r = 0.346, p = $\leq$ .001; cognitive stress, r = 0.277, p = $\leq$ .001; somatic stress, r = 0.246, p = $\leq$ .001; and total stress, r = .344, p = $\leq$ .001.). Coefficients were statistically significant and either weak or moderate in strength[18]. These positive values indicate a relationship between the qualitative dimension of 'demand' and all three measures of the 'stress'

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[18] Strength of correlation (Cohen, 1988): r = -+ .10 to -+ .29 small (weak); r = -+ .30 to -+ .49 medium (moderate); r = -+ .50 to -+ 1.0 large (strong).

dimension and the 'total stress' measure, such that as values for 'qualitative demand' increase, values for stress will also increase.

In addition, significant positive correlations were made between the 'demands for hiding emotions' measure of the 'demand' dimension and 'behavioural stress', $r = 0.193$, $p = \leq .001$; and 'total stress', $r = .344$, $p = \leq .005$. Although statistically significant, the coefficient between 'demands for hiding emotions' and 'behavioural stress' was weak, whereas the coefficient between 'demands for hiding emotions' and 'total stress' was moderate. Positive values indicate a relationship between 'demands for hiding emotions' and the 'behavioural' dimension of stress and 'total stress', such that as values for 'demands for hiding emotions' increase, values for 'behavioural stress' and 'total stress' will increase.

Table 2.6: *Spearman's* rho, non-parametric measure of correlation, for all respondents', between the COPOSQ measures of the 'Demand' and 'Stress' dimensions; and the additional measure of 'Total Stress'.

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Quantitative Demands	Correlation Coefficient	0.346**	0.246**	0.277**	0.344**
	Sig. (2-tailed)	0.000	0.001	0.000	0.000
	N	178	179	179	178
Emotional Demands	Correlation Coefficient	0.141	0.017	0.037	0.072
	Sig. (2-tailed)	0.060	0.825	0.628	0.338
	N	178	179	179	178
Cognitive Demands	Correlation Coefficient	0.126	0.117	-0.035	0.061
	Sig. (2-tailed)	0.095	0.118	0.642	0.422
	N	178	179	179	178
Sensorial Demands	Correlation Coefficient	-0.043	-0.103	-0.121	-0.100
	Sig. (2-tailed)	0.572	0.170	0.107	0.182
	N	178	179	179	178
Demands for Hiding	Correlation Coefficient	0.193**	0.042	0.144	0.157*

| Emotions | Sig. (2-tailed) | 0.010 | 0.575 | 0.054 | 0.037 |
| | N | 178 | 179 | 179 | 178 |

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

Table 2.7 shows the Spearman's rho, non-parametric measures of correlation, for Physiotherapists', between the measures for the dimension of 'demand' and the measures for the dimension of 'stress', an addition to the additional measure of 'total stress'. The table illustrates significant positive correlations were made between 'qualitative demands' all three measures of the 'stress' dimension and the 'total stress' measure (Behavioural stress, r = .350, p = < .001; somatic stress, r = .245, p = < .001; cognitive stress, r = .306, p = < .001; and total stress, r = .358, p = < .001.). The coefficients are statistically significant, and either weak or moderate in strength. These positive values indicate a relationship between the 'qualitative' measure of the 'demand' dimension and all three measures of the 'stress' dimension and the total stress measure, such that as values for 'qualitative demands' increase, values for all three measures of 'stress' and total stress will also increase.

Table 2.7: *Spearman's* **rho, non-parametric measure of correlation, for Physiotherapists', between the COPOSQ measures of the 'Demand' and 'Stress' dimensions; and the additional measure of 'Total Stress'.**

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Quantitative Demands	Correlation Coefficient	0.350**	0.245**	0.306**	0.358**
	Sig. (2-tailed)	0.000	0.008	0.001	0.000
	N	116	117	117	116
Emotional Demands	Correlation Coefficient	0.153	0.024	0.012	0.063
	Sig. (2-tailed)	0.102	0.797	0.900	0.501
	N	116	117	117	116
Cognitive Demands	Correlation Coefficient	0.116	0.158	-0.044	0.050
	Sig. (2-tailed)	0.215	0.090	0.638	0.592

	N	116	117	117	116
Sensorial Demands	Correlation Coefficient	-0.028	-0.090	-0.095	-0.088
	Sig. (2-tailed)	0.768	0.337	0.306	0.346
	N	116	117	117	116
Demands for Hiding Emotions	Correlation Coefficient	0.104	-0.057	0.128	0.077
	Sig. (2-tailed)	0.266	0.540	0.168	0.413
	N	116	117	117	116

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

Table 2.8 shows the Spearman's rho, non-parametric measures of correlation, for Occupational therapists', between the measures for the dimension of 'demand' and the measures for the dimension of 'stress', an addition to the additional measure of 'total stress'. The table illustrates for occupational therapists, significant positive correlations between 'quantitative demands' with 'behavioural stress', $r = .345$, $p = \leq$ .001; and 'total stress', $r = .313$, $p = \leq$ .005. Although, statistically significant, the coefficient between 'qualitative demands' and 'total stress' is weak. The coefficient between 'qualitative demands' and 'behavioural stress' is moderate in strength. These positive values indicate a relationship between the 'qualitative demand' measure of the 'demand' dimension and the measures of 'behavioural stress' and 'total stress', such that as values for 'qualitative demands' increase, values for 'behavioural stress' and 'total stress' will also increase.

In addition, the table also shows significant positive correlations between 'demands for hiding emotions' and 'behavioural stress', $r = 0$. 348, $p = \leq$ .001 (moderate coefficient strength); and 'Total stress', $r = .0$. 286, $p = \leq$ .005 (weak coefficient strength). These coefficients are statistically significant. The positive values indicate a relationship between 'demands for hiding emotions' and 'behavioural stress'; and 'total stress', such that as values for the 'demands for hiding emotions' measure of the 'demand' dimension increase, values for 'behavioural stress' and 'total stress' will increase.

Table 2.8: *Spearman's* rho, non-parametric measure of correlation, for Occupational Therapists', between the COPOSQ measures of the 'Demand' and 'Stress' dimensions; and the additional measure of 'Total Stress'.

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Quantitative Demands	Correlation Coefficient	0.345**	0.251	0.218	0.313*
	Sig. (2-tailed)	0.006	0.049	0.088	0.013
	N	62	62	62	62
Emotional Demands	Correlation Coefficient	0.136	0.008	0.081	0.102
	Sig. (2-tailed)	0.292	0.950	0.529	0.429
	N	62	62	62	62
Cognitive Demands	Correlation Coefficient	0.142	0.030	-0.013	0.073
	Sig. (2-tailed)	0.271	0.820	0.919	0.571
	N	62	62	62	62
Sensorial Demands	Correlation Coefficient	-0.064	-0.133	-0.152	-0.132
	Sig. (2-tailed)	0.623	0.304	0.239	0.307
	N	62	62	62	62
Demands for Hiding Emotions	Correlation Coefficient	0.348**	0.222	0.201	0.286*
	Sig. (2-tailed)	0.006	0.083	0.117	0.024
	N	62	62	62	62

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

2.9.3 Work Organisation and Content of Work

Response options and scoring for the COPSOQ work organisation and content of work measures:

- 'Always' (100), 'Often' (75), 'Sometimes' (50), 'Seldom' (25), 'Never/hardly ever' (0).

- 'To a very large extent' (100), 'To a large extent' (75), 'Somewhat' (50), 'To a small extent' (25), 'To a very small extent' (0).

Table 2.9 illustrates descriptive statistics (medians and standard deviation) for all respondents per each measures of the 'work organisation and content of work' dimension. Additionally, figure 2.3 represents the median and interquartile ranges for these measures. The results indicate respondents report that 'influence at work' and 'degrees of freedom at work' were 'somewhat' or 'sometimes' aspects of their jobs, but less so in comparison to the other 'work organisation and content of work' measures, which were reported as being 'often' or 'to a large extent' characteristic of their occupations.

The results therefore; show that respondents self report high levels of possibilities for development (e.g. possibility of learning new things through work), meaning of work (e.g. feeling motivated and involved in their work?), and commitment to the workplace (e.g. feel that your place of work is of great personal importance to them) and moderate levels of 'influence at work' (e.g. having influence concerning their work), and 'degrees of freedom at work' (e.g. deciding when to take a break).

Table 2.9: Medians and standard deviations for the measures of the 'Work organisation and content of work' dimension.

	Influence at Work	Possibilities for Development	Degrees of Freedom at Work	Meaning of Work	Commitment to the workplace
N Valid Missing	179 0	179 0	179 0	179 0	179 0
Median	50	75	50	75	62.50
Std. Deviation	19.67	16.35	22.52	15.17	19
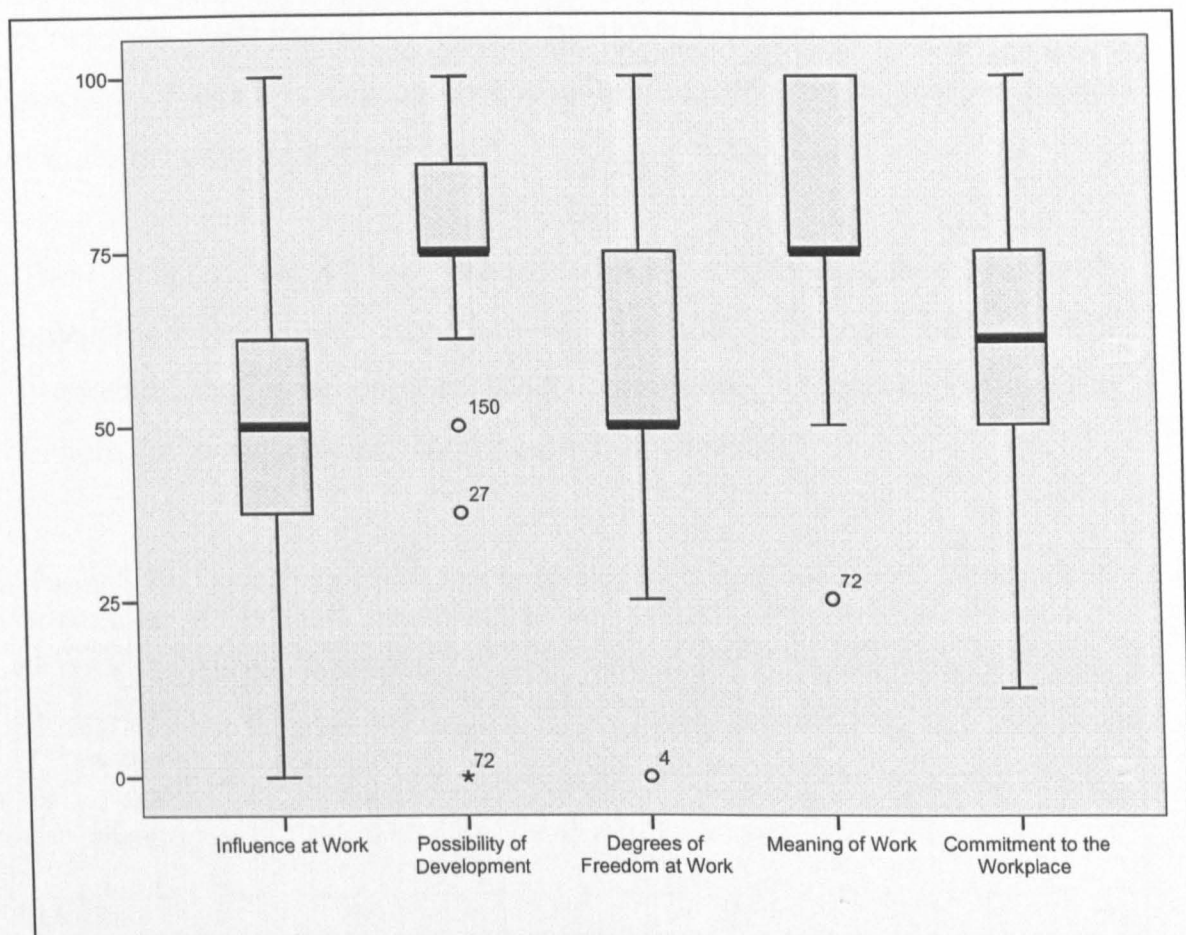
Figure 2.3: Box plots indicating median scores with interquartile ranges for the measures of the 'Work organisation and content of work' dimension.

Table 2.10 shows the median and standard deviation scores per each measure of the 'Work organisation and content of work' dimension, for physiotherapists and occupational therapists, with the results of the Mann-Whitney U test of difference. Figure 2.4 represents these findings via box plots. The findings reveal a significant difference in median scores between physiotherapists and occupational therapists ($z = -2.660$, $p < .05$.) on the 'influence at work' measure of the 'work organisation and content of work' dimension. The distributions of scores for physiotherapists and occupational therapists are shown not have different medians; they are identical to each other, so the mid-point in the distributions of scores is the same. They do however; have very different distribution skewness. Looking at the box plot for occupational therapists, the whisker to the left is longer (to the lower quartile), and absent to the right; meaning that the distribution is negatively skewed. This suggests that as a group, occupational therapists are more inclined

to report a lower degree of 'Influence at Work' (such as influence in the amount of work assigned to them and having other people make decisions concerning their work).

The findings show no differences in median scores between physiotherapists and occupational therapists for all other 'work organisation and content of work' measures, suggesting that each dimension is reported similarly by each profession.

Table 2.10: Descriptive and inferential statistics for both groups for all measures of the 'work organisation and content of work' dimension.

	Influence at Work	Possibilities of Development	Degrees of Freedom at Work	Meaning of Work	Commitment to the Workplace
Occupational Therapists:					
N Valid	62	62	62	62	62
Missing	0	0	0	0	0
Median	50	75	50	75	50
Std. Deviation	16.99	16.99	17.58	14.79	15.47
Physiotherapists:					
N Valid	117	117	117	117	117
Missing	0	0	0	0	0
Median	50	75	50	75	62.50
Std. Deviation	20.49	16.05	24.62	15.30	20.67
Test of Difference between Physiotherapists and Occupational Therapists:					
Mann-Whitney U	2773.500	3397.000	3202.000	3179.500	3408.000
Z score	-2.660	-.731	-1.360	-1.538	-.678
Asymp.Sig. (2 tailed)	.008	.465	.174	.124	.498
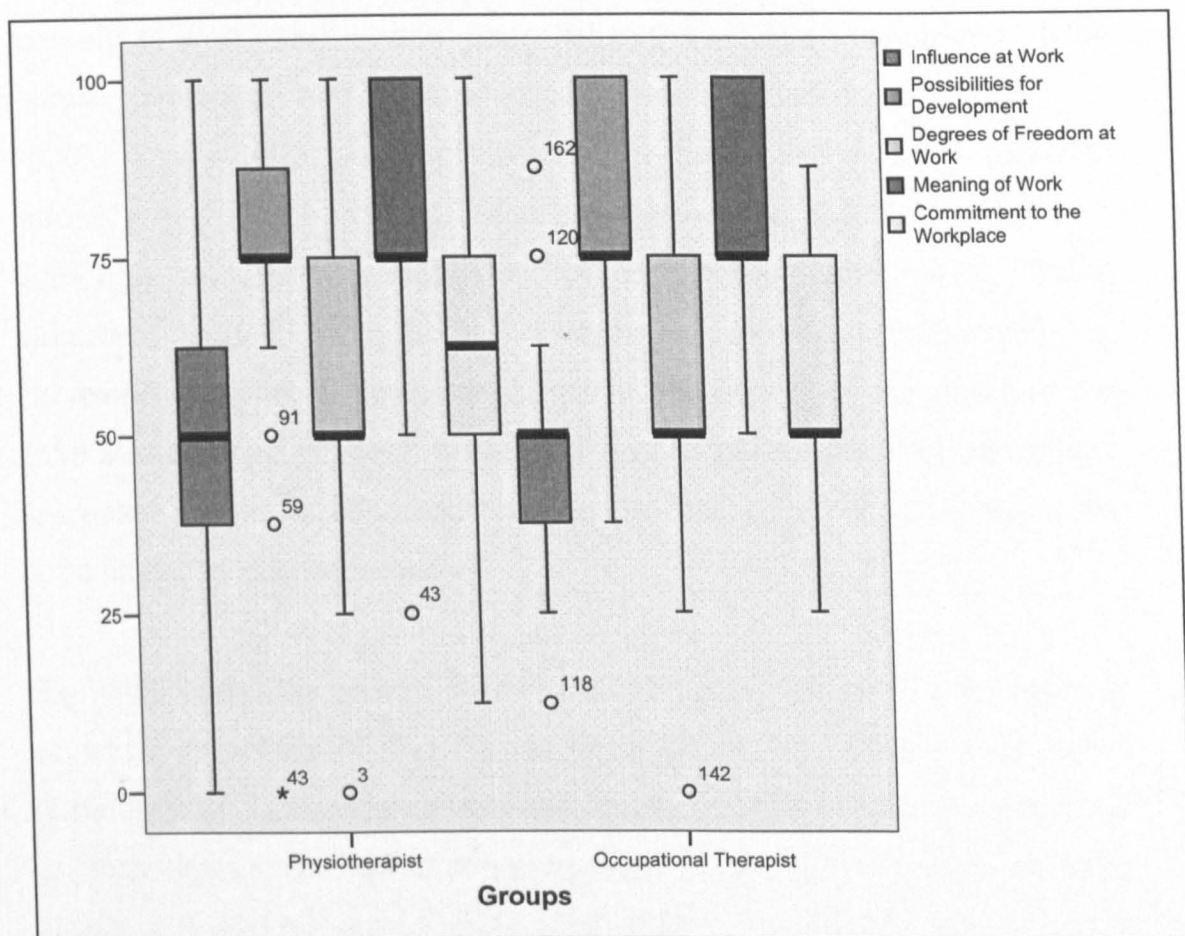
Figure 2.4: Box plots indicating median scores and interquartile ranges for both professional groups for each measure of the 'Work organisation and content of work' dimension.

Table 2.11 shows Spearman's rho, non-parametric measures of correlation, for all respondents', between the COPOSQ measures of 'work organisation and content of work' and 'stress' dimensions; and the additional measure of 'total stress'. The table illustrates for all respondents, significant negative correlations between 'influence at work' and 'cognitive stress', $r = -0.147$, $p = < .005$; and 'total stress', $r = -0.150$, $p = < .005$.). Although statistically significant, the coefficients were weak. These negative values indicate a relationship between the 'influence at work' measure of the 'work organisation and content of work' dimension and 'cognitive stress' along with 'total stress', such that as values for 'influence at work' increase, values for 'cognitive stress' and 'total stress' will decrease.

Further significant negative correlations are shown between the 'possibility of development' measure of the 'work organisation and

content of work' and 'stress' dimension and all three measures of the 'stress' dimension and the total stress measure (Behavioural stress, $r =$ -0.187, $p = \le .005$; somatic stress, $r = -0.179$, $p = \le .005$; cognitive stress, $r = -0.178$, $p = \le .005$; and total stress, $r = -0.215$, $p = \le .001$.). Although statistically significant, the coefficients were weak. These negative values indicate a relationship between 'possibility of development' and all three measures of the 'stress' dimension and the total stress measure, such that as values for 'possibility of development' increase, values for all three measures of the 'stress' dimension and the total stress measure decrease.

Significant negative correlations were also made between the 'meaning of work' measure of the 'Work organisation and content of work' dimension and two measures of the 'stress' dimension and the measure of 'total stress' (behavioural stress, $r = -0.289$, $p = \le .001$; somatic stress, $r = -0.174$, $p = \le .005$; total stress, $r = -0.232$, $p = \le .001$.). Although statistically significant, the coefficients were weak. These negative values indicate a relationship between 'meaning of work' with 'behavioural stress' and 'somatic stress' along with 'total stress', such that as values for 'meaning of work' increase, values for 'behavioural stress', 'somatic stress' and 'total stress' will decrease.

Table 2.11: *Spearman's* rho, non-parametric measure of correlation, for all respondents', between the COPOSQ measures of 'Work organisation and content of work'' and 'Stress' dimensions; and the additional measure of 'Total Stress'.

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Influence at Work	Correlation Coefficient	-0.130	-0.094	-0.147*	-0.150*
	Sig. (2-tailed)	0.083	0.209	0.050	0.046
	N	178	179	179	178
Possibility of Development	Correlation Coefficient	-0.187*	-0.179*	-0.178*	-0.215**
	Sig. (2-tailed)	0.012	0.016	0.017	0.004
	N	178	179	179	178

Degrees of Freedom at Work	Correlation Coefficient	-0.008	-0.085	0.019	-0.010
	Sig. (2-tailed)	0.918	0.260	0.797	0.890
	N	178	179	179	178
Meaning of Work	Correlation Coefficient	-0.289**	-0.174*	-0.131	-0.232**
	Sig. (2-tailed)	0.000	0.020	0.079	0.002
	N	178	179	179	178
Commitment to the Workplace	Correlation Coefficient	0.016	0.028	0.058	0.049
	Sig. (2-tailed)	0.828	0.708	0.437	0.517
	N	178	179	179	178

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

Table 2.12 shows Spearman's rho, non-parametric measures of correlation, for Physiotherapists', between the COPOSQ measures of 'work organisation and content of work' and 'stress' dimensions; and the additional measure of 'total stress'. The table shows a significant negative correlation between 'possibility of development' and 'behavioural stress', $r = -0.191$, $p = \leq .005$; and a significant negative correlation between 'possibility of development' and 'total stress', $r = -0.202$, $p = \leq .005$. Although statistically significant, the coefficients were weak. These negative values indicate a relationships between 'possibility of development' and the 'behavioural stress' measure of the 'stress' dimension; and the measure of 'total stress', such that as values for 'possibility of development' increase, values for 'behavioural stress' and 'total stress' will decrease.

Further significant negative correlations are shown between the 'meaning of work' dimension and two measures of the 'stress' dimension; and the measure of 'total stress' (Behavioural stress, $r = -0.315$, $p = \leq .001$; somatic stress, $r = -0.228$, $p = \leq .005$; total stress, $r = -0.258$, $p = \leq .001$.). Although statistically significant, the coefficients were weak. These negative values indicate a relationship between the

'meaning of work' measure of the 'work organisation and content of work' dimension, and the 'behavioural stress' and 'somatic stress' measures of the 'stress' dimension and the 'total stress' measure, such that as values for 'meaning of work' increase, values for 'behavioural stress', 'somatic stress' and 'total stress' will decrease.

Table 2.12: *Spearman's* rho, non-parametric measure of correlation, for Physiotherapists', between the COPOSQ measures of 'Work organisation and content of work'' and 'Stress' dimensions; and the additional measure of 'Total Stress'.

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Influence at Work	Correlation Coefficient	-0.106	-0.019	-0.171	-0.139
	Sig. (2-tailed)	0.258	0.843	0.066	0.136
	N	116	117	117	116
Possibility of Development	Correlation Coefficient	-0.191*	-0.116	-0.155	-0.202*
	Sig. (2-tailed)	0.041	0.212	0.095	0.029
	N	116	117	117	116
Degrees of Freedom at Work	Correlation Coefficient	0.028	-0.006	0.100	0.078
	Sig. (2-tailed)	0.769	0.945	0.285	0.402
	N	116	117	117	116
Meaning of Work	Correlation Coefficient	-0.315**	-0.228*	-0.116	-0.258**
	Sig. (2-tailed)	0.001	0.013	0.213	0.005
	N	116	117	117	116
Commitment to the Workplace	Correlation Coefficient	0.041	0.077	0.132	0.105
	Sig. (2-tailed)	0.661	0.408	0.157	0.260
	N	116	117	117	116

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

Table 2.13 shows Spearman's rho, non-parametric measures of correlation, for Occupational therapists', between the COPOSQ measures of 'work organisation and content of work' and 'stress'

dimensions; and the additional measure of 'total stress'. The table illustrates a significant negative correlation between 'possibility of development' and 'somatic stress', r = -0.279, p = < .005. And, a significant negative correlation between 'degrees of freedom at work' and 'somatic stress', r = -0.253, p = < .005. Although statistically significant, the coefficients were weak. These negative values indicate relationships between the 'possibility of development' and 'degrees of freedom at work' measures of the 'work organisation and content of work' dimension and the 'somatic stress' measure of the 'stress' dimension, such that as values for 'possibility of development' and 'degrees of freedom at work' increase, values for 'somatic stress' will decrease.

Table 2.13: *Spearman's* rho, non-parametric measure of correlation, for Occupational Therapists', between the COPOSQ measures of 'Work organisation and content of work'' and 'Stress' dimensions; and the additional measure of 'Total Stress'.

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Influence at Work	Correlation Coefficient	-0.162	-0.228	-0.143	-0.176
	Sig. (2-tailed)	0.210	0.075	0.268	0.172
	N	62	62	62	62
Possibility of Development	Correlation Coefficient	-0.196	-0.279*	-0.221	-0.246
	Sig. (2-tailed)	0.127	0.028	0.084	0.054
	N	62	62	62	62
Degrees of Freedom at Work	Correlation Coefficient	-0.072	-0.253*	-0.186	-0.181
	Sig. (2-tailed)	0.578	0.047	0.147	0.159
	N	62	62	62	62
Meaning of Work	Correlation Coefficient	-0.227	-0.076	-0.167	-0.183
	Sig. (2-tailed)	0.076	0.557	0.196	0.154
	N	62	62	62	62
Commitment to the	Correlation Coefficient	-0.027	-0.058	-0.097	-0.064

| Workplace | Sig. (2-tailed) | 0.834 | 0.655 | 0.454 | 0.619 |
| | N | 62 | 62 | 62 | 62 |

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

2.9.4 Interpersonal Relationships and Leadership

Response options and scoring for the COPSOQ interpersonal relationships and leadership measures:

- 'Always' (100), 'Often' (75), 'Sometimes' (50), 'Seldom' (25), 'Never/hardly ever' (0).
- 'To a very large extent' (100), 'To a large extent' (75), 'Somewhat' (50), 'To a small extent' (25), 'To a very small extent' (0).

Tables 2.14a and 2.14b show descriptive statistics (medians and standard deviation) for all respondents per each measure of the 'interpersonal relationships and leadership' dimension. The results indicate respondents report they 'often' or 'somewhat' experience 'role-clarity', 'quality of Leadership', 'social support', and a 'sense of Community', as a consequence of their work. The findings also show that 'role-conflict', 'predictability' and 'feedback at work' are 'sometimes' experienced, together with 'social relations' which is experienced 'somewhat' of the time. Figure 2.5 represents these findings via box plots which display median scores with interquartile ranges. It can be seen that there little or no variability in the distribution of respondents' scores on the measure of 'role-clarity'. This suggests a strong degree of agreement amongst respondents' in the reporting and hence, belief that they have a high level of understanding regarding their work role.

The results therefore; show that respondents self report high levels of 'role-clarity' (e.g. knowing exactly what is expected of them at work), 'quality of leadership' (e.g. appreciates the staff and shows consideration for the individual), 'social support' (e.g. often receiving

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help and support from colleagues) and 'sense of community' (a good atmosphere between colleagues); and moderate levels of 'role-conflict' (e.g. having contradictory demands placed on them at work), 'predictability' (e.g. receiving all the information needed in order to do work well), 'social relations' (e.g. talking to colleagues whilst working) and 'feedback at work' (e.g. receiving feedback from manager about how well work is carried out).

Table 2.14a : Medians and standard deviations for measures of the 'Interpersonal relationships and leadership' dimension.

	Predictability	Role-clarity	Role-conflict	Quality of Leadership
N Valid	179	179	179	179
Missing	0	0	0	0
Median	50	75	50	62.50
Std. Deviation	21.23	17.83	17.40	20.36

Table 2.14b : Medians and standard deviations for measures of the 'Interpersonal relationships and leadership' dimension.

	Social Support	Feedback at Work	Social Relations	Sense of Community
N Valid	179	179	179	179
Missing	0	0	0	0
Median	75	50	50	75
Std. Deviation	19.49	20.45	29.13	15.97
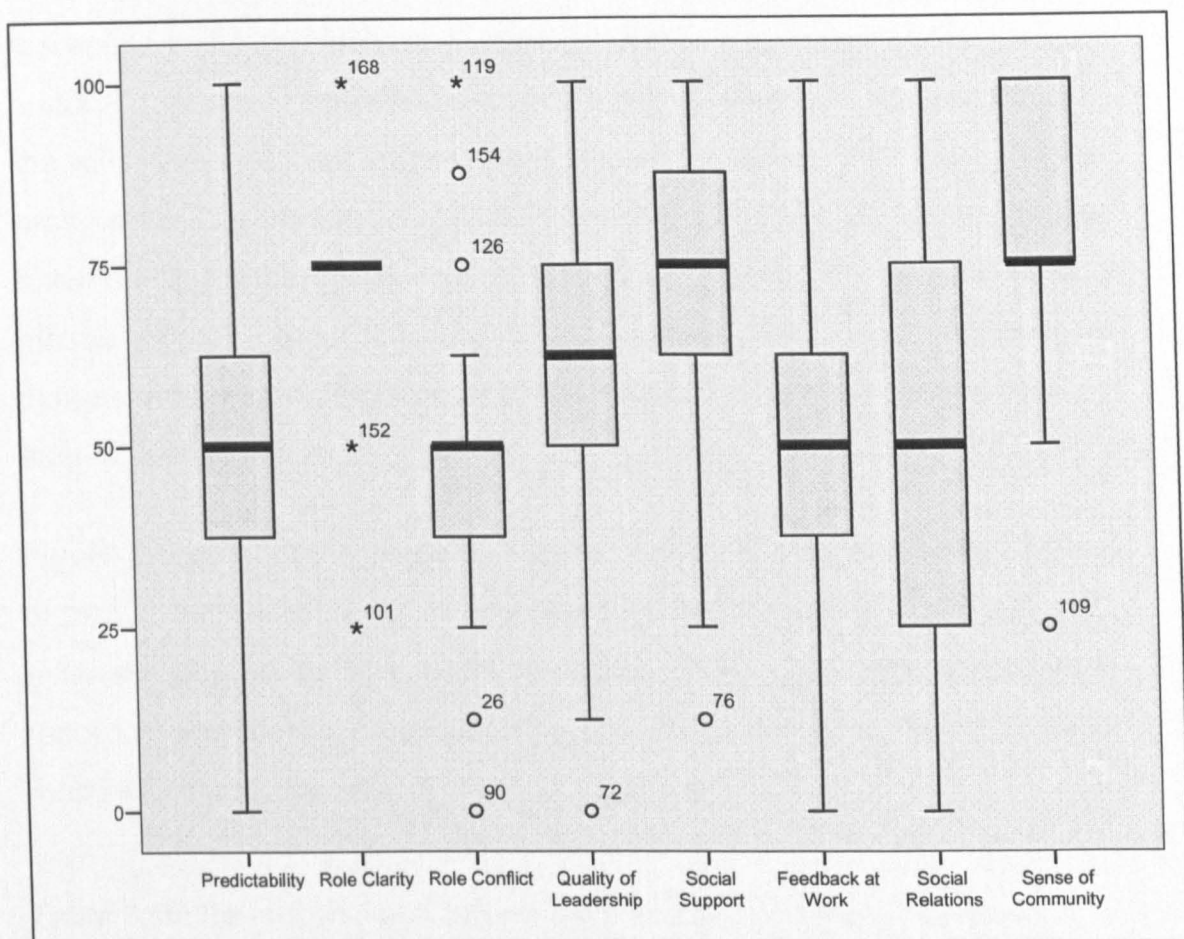
Figure 2.5: Box plots indicating median scores with interquartile ranges for measures of the 'Interpersonal relationships and leadership' dimension.

Tables 2.15 and 2.16 show the median and standard deviation scores per each measure of the 'interpersonal relationships and leadership' dimension, for physiotherapists and occupational therapists, with the results of the Mann-Whitney U test of difference. Figure 2.6 represents these findings via box plots. The findings show a significant difference (z = -1.985, p < .05.) in median scores between physiotherapists and occupational therapists on the measure of 'social support'. The distributions of scores for physiotherapists and occupational therapists are shown not have different medians; they are identical to each other, so the mid-point in the distributions of scores is the same, but they do however, have very different distribution skewness. Looking at the box plot for occupational therapists, the whisker to the left is longer (to the lower quartile), and absent to the right; therefore, the distribution is negatively skewed. This suggests that as a group, occupational

therapists are more inclined to report receiving a lesser level of 'social support' (such as receiving help and support from their colleagues and the willingness of their immediate superior to listen to their work related problems). The findings show no further differences in median scores between physiotherapists and occupational therapists for the remaining measures of the 'interpersonal relationships and leadership' dimensions, suggesting that each dimension is reported as similarly by each profession.

Figure 2.6 additionally illustrates little or no variability in the distribution of physiotherapists' sores on the measure of 'role clarity'. This suggests a strong degree of agreement amongst physiotherapists' about their reporting and hence, understanding of what their role is and about what their responsibilities are.

Table 2.15: Descriptive and inferential statistics for each professional group for measures of the 'Interpersonal relationships and leadership' dimension.

	Predictability	Role-clarity	Role-conflict	Quality of Leadership
Occupational Therapists:				
N Valid	62	62	62	62
Missing	0	0	0	0
Median	50	75	50	50
Std. Deviation	20.31	18.77	13.89	19.68
Physiotherapists:				
N Valid	117	117	117	117
Missing	0	0	0	0
Median	50	75	50	62.50
Std. Deviation	21.78	17.21	19.01	20.59
Test of Difference between Physiotherapists and Occupational Therapists:				
Mann-Whitney U	3587.500	3117.000	3407.500	3507.000
Z scores				
Asymp. Sig. (2 tailed)	.903	.118	.486	.074

Table 2.16: Descriptive and inferential statistics for each professional group for measures of the 'Interpersonal relationships and leadership dimension'.

	Social Support	Feedback at Work	Social Relations	Sense of Community
Occupational Therapists:				
N Valid Missing	62 0	62 0	62 0	62 0
Median	75	50	50	75
Std. Deviation	17.78	18.68	28.33	16.40
Physiotherapists:				
N Valid Missing	117 0	117 0	117 0	117 0
Median	75	50	50	75
Std. Deviation	20.22	21.29	29.59	15.79
Test of Difference between Physiotherapists and Occupational Therapists:				
Mann-Whitney U	2991.000	3267.000	3381.000	3399.500
Z scores	-1.985	-1.023	-.767	-.468
Asymp. Sig. (2 tailed)	.047	.306	.443	.640
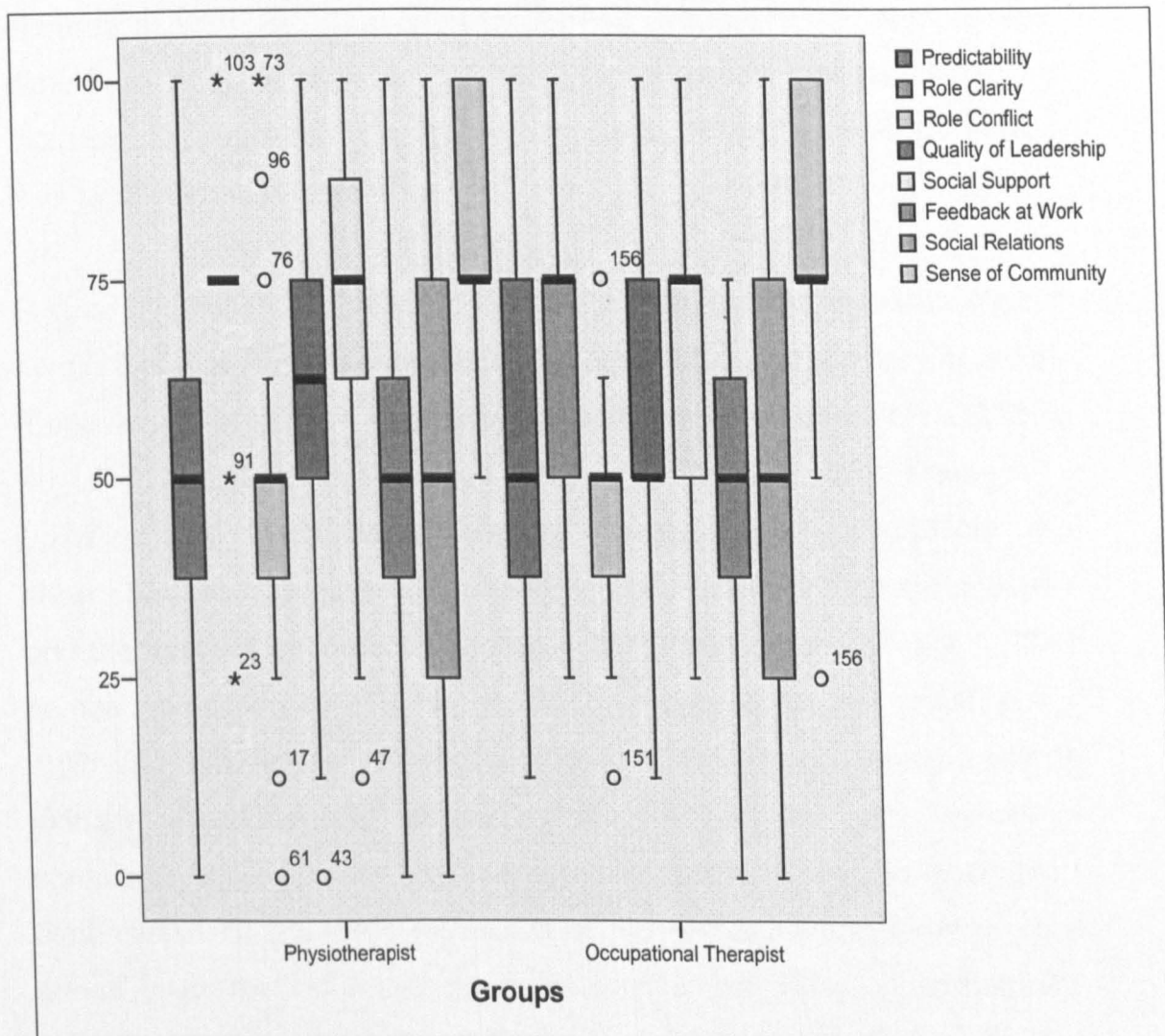
Figure 2.6: Box plots indicating median scores and interquartile ranges for both professional groups for measures of the 'Interpersonal relationships and leadership' dimension.

Table 2.17 shows Spearman's rho, non-parametric measures of correlation for all respondents', between measures of the 'interpersonal relationships and leadership' dimension and measures of the 'stress' dimension and the additional measure of 'total stress'. The table illustrates significant negative correlations between 'predictability' and 'behavioural stress', r = -0.196, p = < .001; and 'Predictability' and 'Total stress', r = -0.157, p = < .005. Significant negative correlations are also shown between 'role clarity' and 'behavioural stress', r = -0.181, p = < .005; and 'role clarity' and 'total stress', r = -0.175, p = ≤ .005. These negative values indicate a relationship between the 'predictability' and 'role clarity' measures of the 'interpersonal relationships and leadership'

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dimension with the 'behavioural stress' measure of the 'stress' dimension and the measure of 'total stress', such that as values for 'predictability' and 'role clarity' increase, values for 'behavioural stress' and 'total stress' will decrease.

Further significant negative correlations are shown between 'social support' and all three dimensions of stress and the total stress measure (behavioural stress, r = -0.251, p = $\leq$ .001; somatic stress, r = -0.268, p = $\leq$ .001; cognitive stress, r = -0.198, p = $\leq$ .001; and total stress, r = -0.287, p = $\leq$ .001.). And finally significant negative correlations are shown between 'sense of community' and all three dimensions of stress and the total stress measure (behavioural stress, r = -0.217, p = $\leq$ .001; somatic stress, r = -0.210, p = $\leq$ .001; cognitive stress, r = -0.235, p = $\leq$ .001; and total stress, r = --0.261, p = $\leq$ .001.). These negative values indicate a relationship between the 'predictability' and 'sense of community' measures of the 'interpersonal relationships and leadership' dimension with the three measures of the 'stress' dimension and 'total stress', such that as values for 'predictability' and 'sense of community' increase, values for the three measures of the 'stress' dimension and 'total stress' will decrease.

Significant positive correlations were made between 'role conflict' all three dimensions of stress and the total stress measure (Behavioural stress, r = 0.324, p = $\leq$ .001; somatic stress, r = 0.214, p = $\leq$ .001; cognitive stress, r = 0.272, p = $\leq$ .001; and total stress, r = 0.325, p = $\leq$ .001.). A further significant positive relationship was shown between 'social relations' and 'cognitive stress', r = 0.166, p = $\leq$ .001. These positive values indicate a relationship between the 'role conflict' measure of the 'interpersonal relationships and leadership' dimension and all three dimensions of stress and the total stress measure; and a further relationship between the 'social relations' measure of the 'interpersonal relationships and leadership' dimension and the measure of 'cognitive stress', such that as values for 'role conflict' increase, values for the stress dimensions and 'total stress' will increase; and as

values for 'social relations' increase, values for 'cognitive stress' will increase.

Although statistically significant, the coefficients for all significant positive and negative correlations were weak.

Table 2.17: *Spearman's* rho, non-parametric measure of correlation, for all respondents', between the COPOSQ measures of 'interpersonal relationships and leadership' and 'Stress' dimensions; and the additional measure of 'Total Stress'.

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Predictability	Correlation Coefficient	-0.196**	-0.130	-0.122	-0.157*
	Sig. (2-tailed)	0.009	0.083	0.105	0.036
	N	178	179	179	178
Role Clarity	Correlation Coefficient	-0.181*	-0.119	-0.137	-0.175*
	Sig. (2-tailed)	0.016	0.112	0.067	0.020
	N	178	179	179	178
Role Conflict	Correlation Coefficient	0.324**	0.214**	0.272**	0.325**
	Sig. (2-tailed)	0.000	0.004	0.000	0.000
	N	178	179	179	178
Quality of Leadership	Correlation Coefficient	-0.156	-0.152	-0.104	-0.166
	Sig. (2-tailed)	0.037	0.043	0.168	0.027
	N	178	179	179	178
Social Support	Correlation Coefficient	-0.251**	-0.268**	-0.198**	-0.287**
	Sig. (2-tailed)	0.001	0.000	0.008	0.000
	N	178	179	179	178
Feedback at Work	Correlation Coefficient	0.031	-0.017	0.108	0.048
	Sig. (2-tailed)	0.677	0.818	0.151	0.522
	N	177	178	178	177
Social Relations	Correlation Coefficient	-0.002	0.088	0.166*	0.092
	Sig. (2-tailed)	0.983	0.243	0.026	0.220
	N	178	179	179	178

Sense of Community	Correlation Coefficient	-0.217**	-0.210**	-0.235**	-0.261**
	Sig. (2-tailed)	0.004	0.005	0.002	0.000
	N	176	176	176	176

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

Table 2.18 *Spearman's* rho, non-parametric measure of correlation, for Physiotherapists' between the COPOSQ measures of 'interpersonal relationships and leadership' and 'Stress' dimensions; and the additional measure of 'Total Stress. The table illustrates significant positive correlations between 'role conflict' all three dimensions of stress and the total stress measure (Behavioural stress, $r = 0.362$, $p = \leq$ .001; somatic stress, $r = 0.276$, $p = \leq$ .001; cognitive stress, $r = 0.303$, $p = \leq$ .001; and total stress, $r = 0.376$, $p = \leq$ .001.). A further significant positive relationship was shown between 'social relations' and 'cognitive stress', $r = 0.210$, $p = \leq$ .005. Although statistically significant, the coefficients were weak. These positive values indicate a relationship between the 'role conflict' measure and all three dimensions of stress and the total stress measure; and a relationship between 'social relations' and the measure of 'cognitive stress', such that as values for 'role conflict' increase, values for the stress dimensions and 'total stress' will increase; and as values for 'social relations' increase, values for 'cognitive stress' will increase.

Significant negative correlations are shown between 'social support' and 'somatic stress', $r = -0.251$, $p = < .005$; 'social support' and 'total stress', $r = -0.241$, $p = < .001$.). Although statistically significant, the coefficients were weak. These negative values indicate a relationship between 'social support' and 'somatic stress'; and 'social support' and 'total stress', such that as values for the 'social support' measure of the 'interpersonal relationships and leadership' dimension increases, values for 'somatic stress' and 'total stress' will decrease.

Table 2.18: *Spearman's* rho, non-parametric measure of correlation, for Physiotherapists', between the COPOSQ measures of "interpersonal relationships and leadership' and 'Stress' dimensions; and the additional measure of 'Total Stress'.

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Predictability	Correlation Coefficient	-0.133	-0.095	-0.056	-0.093
	Sig. (2-tailed)	0.156	0.308	0.551	0.322
	N	116	117	117	116
Role Clarity	Correlation Coefficient	-0.163	-0.040	-0.125	-0.141
	Sig. (2-tailed)	0.080	0.665	0.179	0.130
	N	116	117	117	116
Role Conflict	Correlation Coefficient	0.362**	0.276**	0.303**	0.376**
	Sig. (2-tailed)	0.000	0.003	0.001	0.000
	N	116	117	117	116
Quality of Leadership	Correlation Coefficient	-0.054	-0.116	-0.057	-0.097
	Sig. (2-tailed)	0.566	0.212	0.541	0.300
	N	116	117	117	116
Social Support	Correlation Coefficient	-0.159	-0.215*	-0.181	-0.241**
	Sig. (2-tailed)	0.089	0.020	0.051	0.009
	N	116	117	117	116
Feedback at Work	Correlation Coefficient	0.095	0.026	0.134	0.089
	Sig. (2-tailed)	0.312	0.782	0.153	0.344
	N	115	116	116	115
Social Relations	Correlation Coefficient	-0.038	0.057	0.210*	0.107
	Sig. (2-tailed)	0.682	0.540	0.023	0.253
	N	116	117	117	116
Sense of Community	Correlation Coefficient	-0.204	-0.258	-0.190	-0.245
	Sig. (2-tailed)	0.030	0.005	0.043	0.009
	N	114	114	114	114

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

Table 2.19 shows Spearman's rho, non-parametric measures of correlation, for Occupational Therapists', between the COPOSQ measures of 'interpersonal relationships and leadership' and 'stress' dimensions; and the additional measure of 'total stress'. The table shows significant negative correlations between 'predictability' and the 'behavioural stress' measure of the 'stress' dimension, $r = -0.308$, $p = < .005$; and the measure of 'Total stress', $r = -0.275$, $p = < .005$. Significant negative correlations are also illustrated between 'quality of leadership' and 'behavioural stress', $r = -0.287$, $p = < .005$; and 'total stress', $r = -0.253$, $p = < .005$; and further significant negative correlations are shown between the measure of 'sense of community' and the 'cognitive stress' measure of the 'stress' dimension, $r = -0.326$, $p = < .001$; and the measure of 'total stress, $r = -0.284$, $p = < .005$.). Although statistically significant, the coefficients were weak. These negative values indicate a relationship between the 'predictability' and 'quality of leadership' measures of the 'interpersonal relationships and leadership' dimension and 'behavioural stress' and the 'total stress' measure, such that as values for 'predictability' increase, values for 'behavioural stress' and 'total stress' will decrease. Similarly, the negative values indicate a relationship between 'sense of community' and the 'cognitive stress' measure of the 'stress' dimension, such that as values for 'sense of community' increase, values for 'cognitive stress' will decrease.

The table illustrates a significant positive correlation between the 'role conflict' measure of the 'interpersonal relationships and leadership' dimension and 'behavioural stress', $r = 0.257$, $p = < .005$. Although statistically significant, the coefficient is weak. The positive value indicates a relationship between 'role conflict' and the 'behavioural stress' measure of the 'stress' dimension, such that as value for 'role conflict' increases, the values for 'behavioural stress' will increase.

Table 2.19: *Spearman's* rho, non-parametric measure of correlation, for Occupational Therapists', between the COPOSQ measures of 'interpersonal relationships and leadership' and 'Stress' dimensions; and the additional measure of 'Total Stress'.

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Predictability	Correlation Coefficient	-0.308*	-0.192	-0.249	-0.275*
	Sig. (2-tailed)	0.015	0.136	0.051	0.030
	N	62	62	62	62
Role Clarity	Correlation Coefficient	-0.214	-0.248	-0.165	-0.226
	Sig. (2-tailed)	0.094	0.052	0.199	0.078
	N	62	62	62	62
Role Conflict	Correlation Coefficient	0.257*	0.098	0.207	0.225
	Sig. (2-tailed)	0.043	0.446	0.107	0.079
	N	62	62	62	62
Quality of Leadership	Correlation Coefficient	-0.287*	-0.198	-0.168	-0.253*
	Sig. (2-tailed)	0.024	0.123	0.191	0.048
	N	62	62	62	62
Social Support	Correlation Coefficient	-0.386	-0.352	-0.222	-0.352
	Sig. (2-tailed)	0.002	0.005	0.083	0.005
	N	62	62	62	62
Feedback at Work	Correlation Coefficient	-0.067	-0.096	0.050	-0.020
	Sig. (2-tailed)	0.607	0.457	0.699	0.877
	N	62	62	62	62
Social Relations	Correlation Coefficient	0.064	0.145	0.078	0.077
	Sig. (2-tailed)	0.624	0.261	0.548	0.553
	N	62	62	62	62
Sense of Community	Correlation Coefficient	-0.237	-0.132	-0.326**	-0.284*
	Sig. (2-tailed)	0.064	0.307	0.010	0.025
	N	62	62	62	62

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

2.9.5 Work-individual Interface

Response options and scoring for the COPSOQ individual-work interface measures:
• 'Very satisfied' (100), 'Satisfied' (75), 'Unsatisfied' (50), 'Highly unsatisfied' (25), 'Not relevant' (0).

Table 2.20 shows descriptive statistics (medians and standard deviation) for all respondents per each 'work-individual interface' measure. Additionally, figure 2.7 represents box plots showing the median and interquartile ranges for these measures. The results illustrate that respondent's report 'insecurity at work' to be 'never' or 'seldom' a concern, and report being 'satisfied' with their work. The results therefore; show that respondents self report high levels of job satisfaction (e.g. satisfied with for example, work prospects and the way their abilities are used), and low levels of insecurity at work (e.g. becoming unemployed).

Figure 2.7 represents these findings via box plots which display median scores with interquartile ranges and illustrates little or no variability in the distribution of therapists' high sores on the measure of 'job satisfaction'. This suggests a strong degree of agreement amongst physiotherapists' in their reporting of satisfaction with their work.

Table 2.20: Medians and standard deviations for measures of the 'Work-individual interface' dimension.

		Insecurity at Work	Job Satisfaction
N	Valid	179	178
	Missing	0	1
Median		12.50	75
Std. Deviation		19.45	12.99
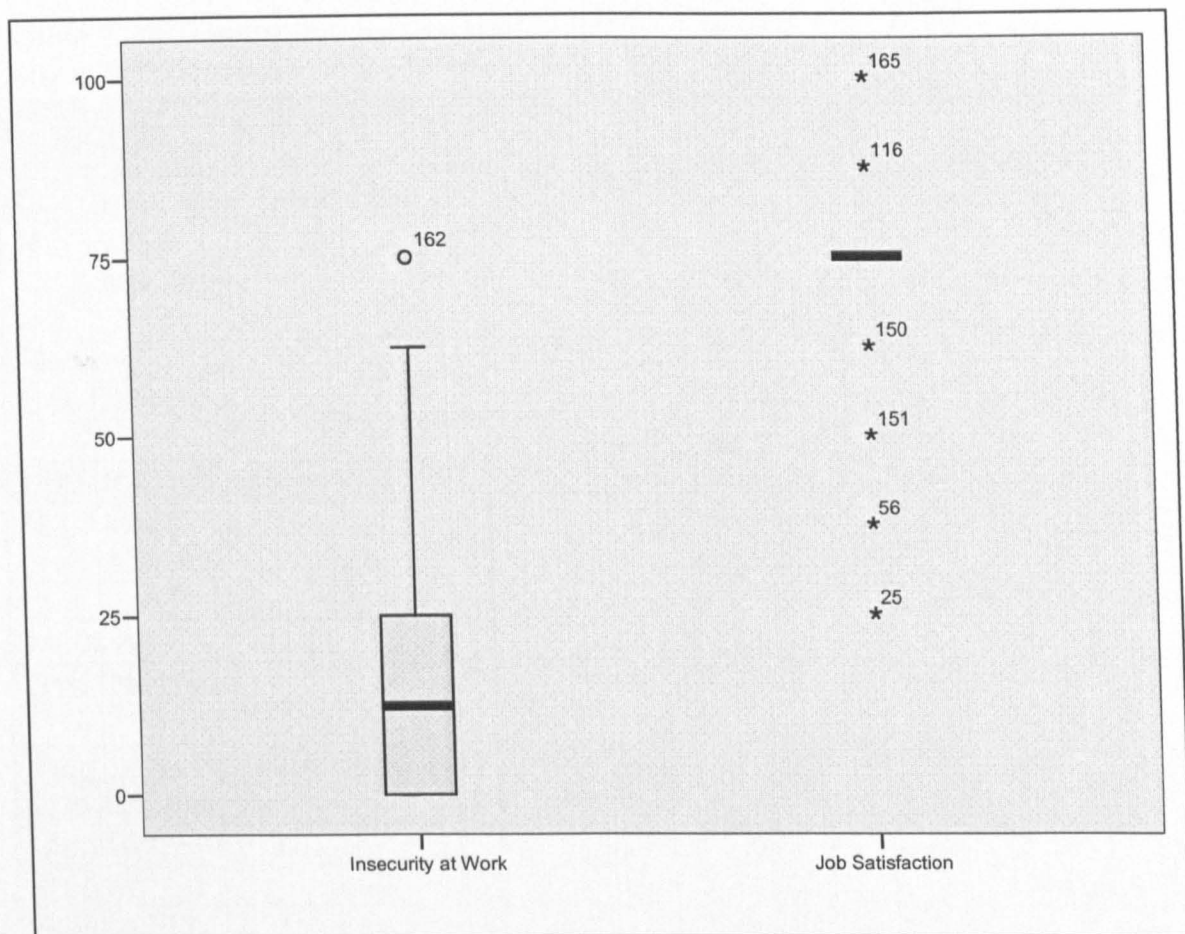
Figure 2.7: Box plots indicating median scores with interquartile ranges for measures of the 'Work-individual interface' dimension.

Table 2.21 shows the median and standard deviation scores per each measure of the 'work-individual interface' dimension, for physiotherapists and occupational therapists, with the results of the Mann-Whitney U test of difference. The data shows no significant differences in median scores between physiotherapists and occupational therapists for both work-individual interface dimensions, suggesting that each dimension is reported similarly by each profession. Figure 2.8 represents these findings via box plots which display median scores with interquartile ranges. It can be seen that there is little or no variability in the distribution of scores for both physiotherapists' and occupational therapists' on the measure of 'job satisfaction'. This suggests a strong degree of agreement amongst respondents from both professions, in their reporting of job satisfaction.

Table 2.21: Descriptive and inferential statistics for each professional group for measures of the 'Work-individual interface' dimension.

	Insecurity at Work	Job Satisfaction
Occupational Therapists:		
N Valid	62	62
Missing	0	0
Median	12.50	75
Std. Deviation	19.85	9.31
Physiotherapists:		
N Valid	117	116
Missing	0	1
Median	12.50	75
Std. Deviation	19.32	14.61
Test of Difference between Physiotherapists and Occupational Therapists:		
Mann-Whitney U	3617.000	3414.500
Z score	-.042	-.653
Asymp.Sig. (2 tailed)	.966	.514
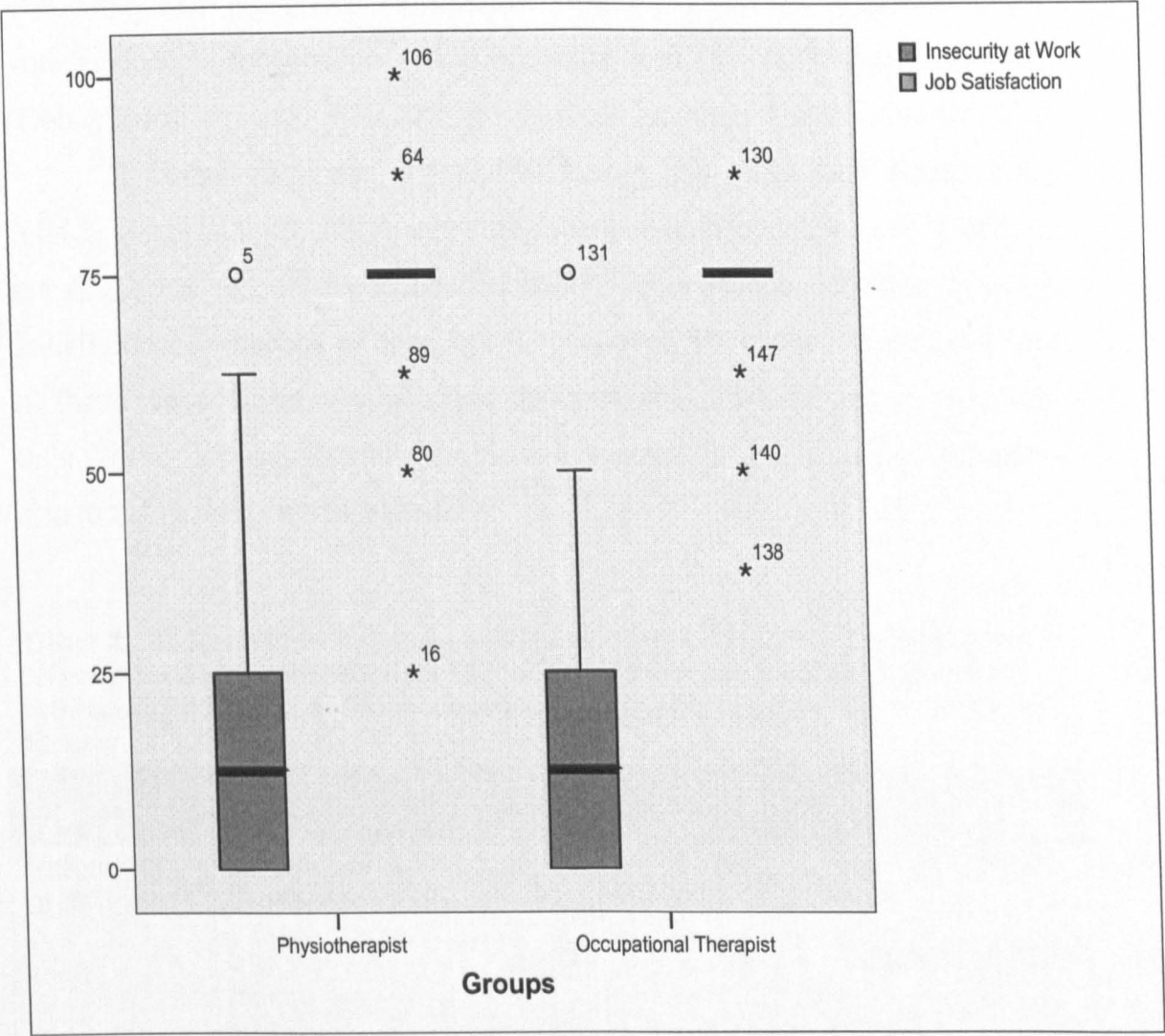
Figure 2.8: Box plots indicating median scores and interquartile ranges for both professional groups for each measure of the 'work-individual interface' dimension.

Table 2.22 Spearman's rho, non-parametric measure of correlation, for all respondents', between the COPOSQ measures of 'work-individual interface' and 'stress' dimensions; and the additional measure of 'total stress'. The table shows significant positive correlations between 'insecurity at work' and the measure of 'total stress', $r = 0.152$, $p = <$ .005. Although statistically significant, the coefficient is very small. The positive value indicates a relationship between 'insecurity at work' and the 'total stress' measure of the 'stress' dimension, such that as the value for 'insecurity at work' increases, the value for 'total stress' will increase.

The table also illustrates significant negative correlations between 'job satisfaction' all three dimensions of stress and the total stress measure (Behavioural stress, $r = -0.221$, $p = \leq .001$; somatic stress, $r = -0.207$, $p = \leq .001$; cognitive stress, $r = -0.230$, $p = \leq .001$; and total stress, $r = -0.243$, $p = \leq .001$.). Although statistically significant, the coefficient is small. These negative values indicate a relationship between the 'job satisfaction' measure of the "work-individual interface' dimension and all three dimensions of stress and the total stress measure, such as that as value for job satisfaction' increases, values for the stress dimensions and 'total stress' will decrease.

Table 2.22: *Spearman's* **rho, non-parametric measure of correlation, for all respondents', between the COPOSQ measures of "work-individual interface' and 'Stress' dimensions; and the additional measure of 'Total Stress'.**

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Insecurity at Work	Correlation Coefficient	0.118	0.081	0.131	0.152*
	Sig. (2-tailed)	0.117	0.278	0.081	0.043
	N	178	179	179	178
Job Satisfaction	Correlation Coefficient	-0.221**	-0.207**	-0.230**	-0.243**
	Sig. (2-tailed)	0.003	0.006	0.002	0.001
	N	178	178	178	178

**. Correlation is significant at the 0.01 level (2-tailed)
 *. Correlation is significant at the 0.05 level (2-tailed)

Table 2.23 Spearman's rho, non-parametric measure of correlation, for Physiotherapists', between the COPOSQ measures of 'work-individual interface' and 'stress' dimensions; and the additional measure of 'total stress'. The table shows significant positive correlations between 'insecurity at work' and the measure of 'total stress', $r = 0.190$, $p = < .005$. Although statistically significant, the coefficient is very small. The positive value indicates a relationship between 'insecurity at work' and the 'total stress' measure of the 'stress' dimension, such that as the

value for 'insecurity at work' increases, the value for 'total stress' will increase.

The table also illustrates significant negative correlations between 'job satisfaction' all three dimensions of stress and the total stress measure (Behavioural stress, $r = -0.255$, $p = \leq .001$; somatic stress, $r = -0.188$, $p = \leq .005$; cognitive stress, $r = -0.251$, $p = \leq .001$; and total stress, $r = -0.263$, $p = \leq .001$.). Although statistically significant, the coefficients are small. These negative values indicate a relationship between the 'job satisfaction' measure of the "work-individual interface' dimension and all three dimensions of stress and the total stress measure, such as that as value for job satisfaction' increases, values for the stress dimensions and 'total stress' will decrease.

Table 2.23: *Spearman's* **rho, non-parametric measure of correlation, for Physiotherapists', between the COPOSQ measures of "work-individual interface' and 'Stress' dimensions; and the additional measure of 'Total Stress'.**

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Insecurity at Work	Correlation Coefficient	0.137	0.102	0.178	0.190*
	Sig. (2-tailed)	0.143	0.273	0.055	0.041
	N	116	117	117	116
Job Satisfaction	Correlation Coefficient	-0.255**	-0.188*	-0.251**	-0.263**
	Sig. (2-tailed)	0.006	0.043	0.006	0.004
	N	116	116	116	116

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

Table 2.24 shows Spearman's rho, non-parametric measures of correlation, for Occupational therapists', between the COPOSQ measures of 'work-individual interface' and 'stress' dimensions; and the additional measure of 'total stress'. No significant correlations are shown, thus indicating that no relationships exist between the COPOSQ

measures of 'work-individual interface' and 'stress' dimensions; and the additional measure of 'total stress'.

Table 2.24: *Spearman's* rho, non-parametric measure of correlation, for Occupational Therapists', between the COPOSQ measures of "work-individual interface' and 'Stress' dimensions; and the additional measure of 'Total Stress'.

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Insecurity at Work	Correlation Coefficient	0.085	0.044	0.045	0.086
	Sig. (2-tailed)	0.511	0.735	0.730	0.506
	N	62	62	62	62
Job Satisfaction	Correlation Coefficient	-0.136	-0.246	-0.195	-0.207
	Sig. (2-tailed)	0.291	0.054	0.130	0.107
	N	62	62	62	62

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

2.9.6 Health

Response options and scoring for the COPSOQ health measures:

- 'All of the time' (100), 'Most of the time' (75), 'A good bit of the time' (50), 'Some of the time' (25), 'None of the time' (0).
- 'Excellent' (100), 'Very good' (75), 'Good' (50), 'Fair' (25), 'Poor' (0)

Table 2.25 shows descriptive statistics (medians and standard deviation) for all respondents per each measure of the 'health' measure. Additionally, figure 2.9 represents the median and interquartile ranges for these measures as box plots. The results indicate that respondents report that within the preceding four weeks to completing the 'health' measures, their 'general health' was 'very good'; their 'mental health' good, and their 'vitality' evident 'a good bit of the time'. The results therefore; show that respondents self report high levels of general health (e.g. are as healthy as anybody they know), and moderate levels

of mental health (e.g. felt calm, peaceful and happy) and vitality (e.g. have a lot of energy).

Table 2.25: Medians and standard deviations for measures of the 'Health' dimension.

		General health	Mental health	Vitality
N	Valid	179	179	179
	Missing	0	0	0
Median		75	50	50
Std. Deviation		19.39	18.02	18.02
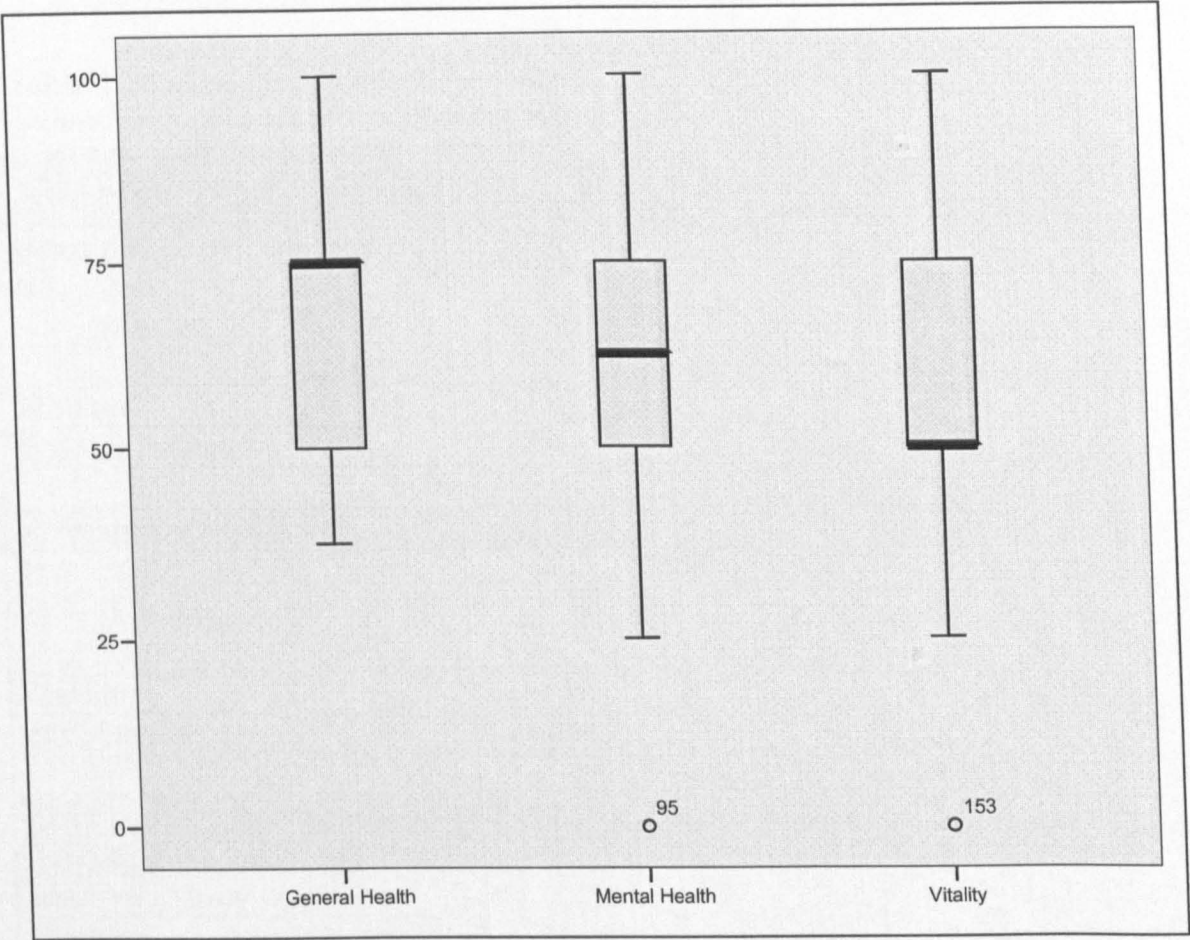
Figure 2.9: Box plots indicating median scores with interquartile ranges for measures of the 'Heath' dimension.

Table 2.26 shows the median and standard deviation scores for physiotherapists and occupational therapists on the measures of 'health', with the results of the Mann-Whitney U test of difference. The findings illustrate no significant differences in median scores between

each professional group, suggesting that measures on the 'health' dimension are reported similarly by respondents from each profession.

Additionally, figure 2.10 represents via box plots the median and interquartile ranges for measures of 'health', and illustrates that for occupational therapists on the 'general health' measure of the 'health' dimension, all scores are dispersed within the interquartile range; no minimum and maximum data values appear outside the upper (75th) and lower (25th) quartiles; the highest and lowest values (there are no overliers) are the third and first quartile.

Table 2.26: Descriptive and inferential statistics for each professional group for measures of the 'Health' dimension.

	General Health	Mental Health	Vitality
Occupational Therapists:			
N Valid	62	62	62
Missing	0	0	0
Median	75	50	50
Std. Deviation	19.13	20.36	19.25
Physiotherapists:			
N Valid	117	116	117
Missing	0	1	0
Median	75	75	50
Std. Deviation	19.55	17.82	17.38
Test of Difference between Physiotherapists and Occupational Therapists:			
Mann-Whitney U	3360.000	3313.500	3456.000
Z score	-.864	-1.037	-.570
Asymp.Sig. (2 tailed)	.388	.300	.568
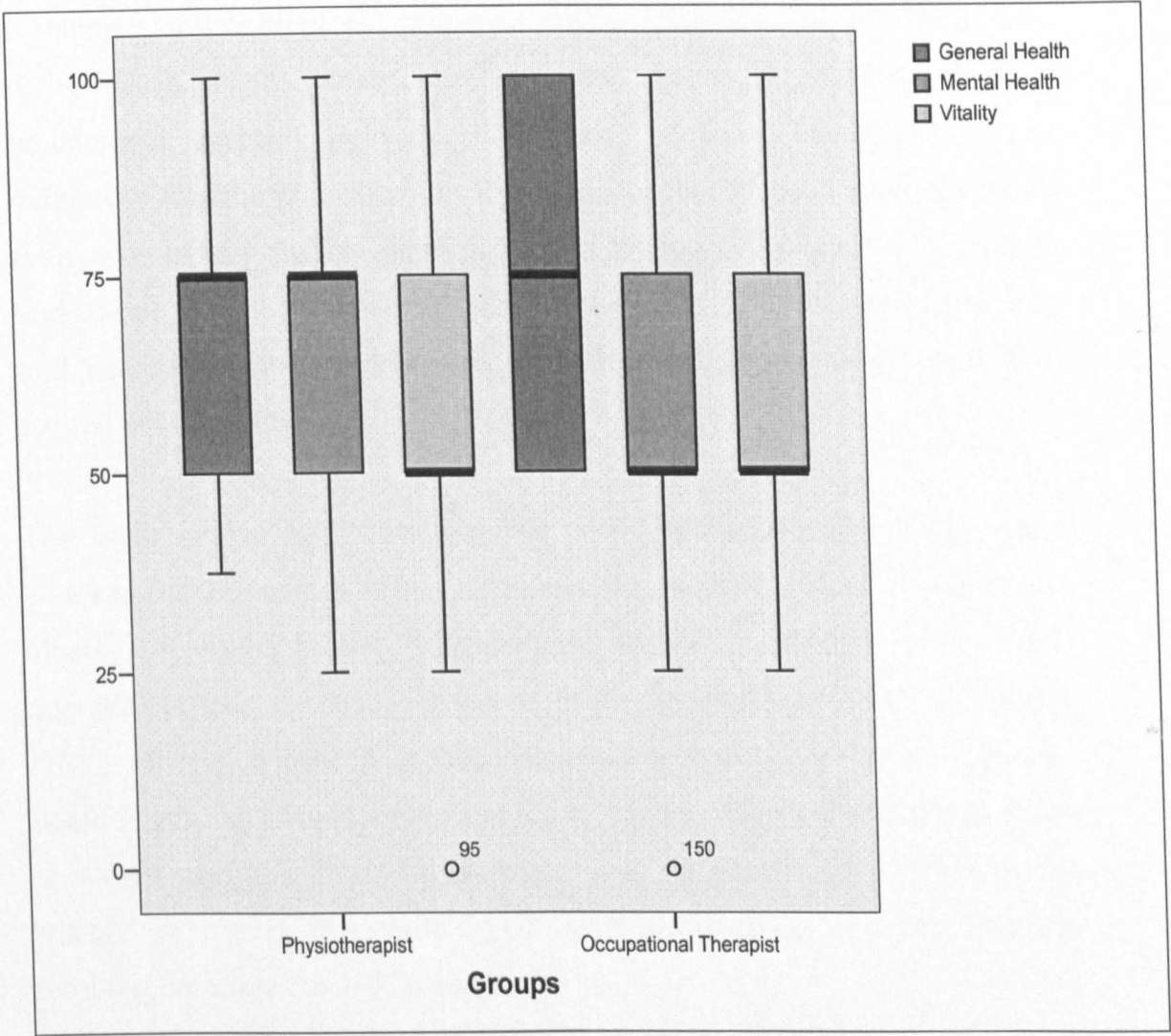
Figure 2.10: Box plots indicating median scores and interquartile ranges for both professional groups for measures of the 'Health' dimension.

Table 2.27 illustrates Spearman's rho, non-parametric measure of correlation, for all respondents', between the COPOSQ measures of 'health' and 'stress' dimensions; and the additional measure of 'total stress'. The table illustrates significant negative correlations between 'general health' and all three dimensions of stress and the total stress measure (Behavioural stress, $r = -0.212$, $p = \leq .001$; somatic stress, $r = -0.344$, $p = \leq .001$; cognitive stress, $r = -0.276$, $p = \leq .001$; and total stress, $r = -0.311$, $p = \leq .001$.). Significant negative correlations are also shown between 'mental health' and all three dimensions of stress and the total stress measure (Behavioural stress, $r = -0.347$, $p = \leq .001$; somatic stress, $r = -0.311$, $p = \leq .005$; cognitive stress, $r = -0.435$, $p = \leq .001$; and total stress, $r = -0.438$, $p = \leq .001$.). Although statistically

significant, the coefficients between 'general health' and the measures of 'behavioural stress' and 'cognitive stress' are weak, whereas all other coefficients indicate moderate correlations. These negative values indicate a relationship between the 'general health' and 'mental health' measures of the 'health' dimension and all three dimensions of stress and the total stress measure, such as that as value for 'general health' and 'mental health' increase, values for the 'stress' measures and 'total stress' will decrease.

The table shows significant positive correlations between 'vitality' and all three dimensions of stress and the total stress measure (Behavioural stress, $r = 0.410$, $p = \leq .001$; somatic stress, $r = 0.386$, $p = \leq .001$; cognitive stress, $r = 0.324$, $p = \leq .001$; and total stress, $r = 0.432$, $p = \leq .001$.). The coefficients indicate moderate correlations. The positive value indicates a relationship between 'vitality' and all three dimensions of stress and the total stress measure, such that as the value for 'vitality' increases, the value for all three dimensions of stress and the total stress measure will increase.

Table 2.27: *Spearman's* **rho, non-parametric measure of correlation, for all respondents', between the COPOSQ measures of 'Health' and 'Stress' dimensions; and the additional measure of 'Total Stress'.**

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
General Health	Correlation Coefficient	-0.212**	-0.344**	-0.276**	-0.311**
	Sig. (2-tailed)	0.005	0.000	0.000	0.000
	N	178	179	179	178
Mental Health	Correlation Coefficient	-0.347**	-0.311**	-0.435**	-0.438**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
	N	178	179	179	178
Vitality	Correlation Coefficient	0.410**	0.386**	0.324**	0.432**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000

	N	178	179	179	178

Table 2.28 illustrates Spearman's rho, non-parametric measure of correlation, for Physiotherapists', between the COPOSQ measures of 'health' and 'stress' dimensions; and the additional measure of 'total stress'. The table illustrates significant negative correlations between 'general health' and all three dimensions of stress and the total stress measure (Behavioural stress, $r = -0.200$, $p = \leq .005$; somatic stress, $r = -0.345$, $p = \leq .001$; cognitive stress, $r = -0.274$, $p = \leq .001$; and total stress, $r = -0.308$, $p = \leq .001$.). Significant negative correlations are also shown between 'mental health' all three dimensions of stress and the total stress measure (Behavioural stress, $r = -0.372$, $p = \leq .001$; somatic stress, $r = -0.266$, $p = \leq .001$; cognitive stress, $r = -0.431$, $p = \leq .001$; and total stress, $r = -0.436$, $p = \leq .001$.). Although statistically significant, the coefficients between 'general health' and the measures of 'behavioural stress' and 'cognitive stress'; and the coefficient between 'mental health' and 'somatic stress' are weak, whereas all other coefficients indicate moderate correlations. These negative values indicate a relationship between the 'general health' and 'mental health' measures of the 'health' dimension and all three measures of the 'stress' dimension and the total stress measure, such as that as value for 'general health' and 'mental health' increase, values for the 'stress' measures and 'total stress' will decrease.

The table shows significant positive correlations between 'vitality' and all three dimensions of stress and the total stress measure (Behavioural stress, $r = 0.320$, $p = \leq .001$; somatic stress, $r = 0.313$, $p = \leq .001$; cognitive stress, $r = 0.264$, $p = \leq .001$; and total stress, $r = 0.349$, $p = \leq .001$.). Although statistically significant, the coefficient between 'vitality' and the measure of 'cognitive stress' is weak, whereas; all other coefficients indicate moderate correlations. The positive value indicates a relationship between 'vitality' and all three dimensions of stress and the total stress measure, such that as the value for 'vitality' increases,

the value for all three dimensions of stress and the total stress measure will increase.

Table 2.28: *Spearman's* **rho, non-parametric measure of correlation, for Physiotherapists', between the COPOSQ measures of 'Health' and 'Stress' dimensions; and the additional measure of 'Total Stress'.**

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
General Health	Correlation Coefficient	-0.200*	-0.345**	-0.274**	-0.308**
	Sig. (2-tailed)	0.031	0.000	0.003	0.001
	N	116	117	117	116
Mental Health	Correlation Coefficient	-0.372**	-0.266**	-0.431**	-0.436**
	Sig. (2-tailed)	0.000	0.004	0.000	0.000
	N	116	117	117	116
Vitality	Correlation Coefficient	0.320**	0.313**	0.264**	0.349**
	Sig. (2-tailed)	0.000	0.001	0.004	0.000
	N	116	117	117	116

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

Table 2.29 illustrates Spearman's rho, non-parametric measure of correlation, for Occupational Therapists', between the COPOSQ measures of 'health' and 'stress' dimensions; and the additional measure of 'total stress'. The table illustrates significant negative correlations between 'general health' and 'somatic stress', r = -0.336, p = ≤ .001; and the 'total stress' measure, r = -0.340, p = ≤ .001.). These coefficients indicate moderate correlations. These negative values indicate a relationship between 'general health' and 'somatic stress' and the 'total stress' measure, such as that as value for 'general health' increases, values for the 'somatic stress' measure of the 'stress' dimension and 'total stress' will decrease.

Significant negative correlations are also shown between 'mental health' all three dimensions of stress and the total stress measure (Behavioural stress, $r = 0.291$, $p = \leq .005$; somatic stress, $r = -0.380$, $p = \leq .001$; cognitive stress, $r = -0.458$, $p = \leq .001$; and total stress, $r = -0.437$, $p = \leq .001$.). Although statistically significant, the coefficients between 'mental health' and the measure of 'Bbhavioural stress' is weak, whereas; all other coefficients indicate moderate correlations. These negative values indicate a relationship between the 'mental health' measures of the 'health' dimension and all three dimensions of stress and the total stress measure, such as that as values for 'mental health' increase, values for the measures of the 'stress' dimension and 'total stress' will decrease.

The table shows significant positive correlations between 'vitality' and all three dimensions of stress and the total stress measure (Behavioural stress, $r = 0.529$, $p = \leq .001$; somatic stress, $r = 0.497$, $p = \leq .001$; cognitive stress, $r = 0.429$, $p = \leq .001$; and total stress, $r = 0.545$, $p = \leq .001$.). The coefficient between 'vitality' and all three dimensions of stress and the total stress measure are strong. These positive values indicates a strong relationship between 'vitality' and all three dimensions of stress and the total stress measure, such that as the value for 'vitality' increases, the value for all three measures of stress and the total stress measure will increase.

Table 2.29: *Spearman's* rho, non-parametric measure of correlation, for Occupational Therapists', between the COPOSQ measures of 'Health' and 'Stress' dimensions; and the additional measure of 'Total Stress'.

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
General Health	Correlation Coefficient	-0.229	-0.336**	-0.275	-0.340**
	Sig. (2-tailed)	0.073	0.008	0.031	0.007
	N	62	62	62	62
Mental Health	Correlation Coefficient	-0.291*	-0.380**	-0.458**	-0.437**
	Sig. (2-	0.022	0.002	0.000	0.000

	tailed)				
	N	62	62	62	62
Vitality	Correlation Coefficient	0.529**	0.497**	0.429**	0.545**
	Sig. (2-tailed)	0.000	0.000	0.001	0.000
	N	62	62	62	62

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

2.9.7 Stress

Response options and scoring for the COPSOQ stress measures:

- 'Always' (100), 'Often' (75), 'Sometimes' (50), 'Seldom' (25), 'Never/hardly ever' (0).
- 'Correct' (100), 'Almost correct' (75), 'Somewhat correct' (50), 'Only slightly correct' (25), 'Incorrect' (0).

Table 2.30 shows descriptive statistics (medians and standard deviation) for respondents per each measure of the 'stress' dimension' as measured by the COPSOQ, with the additional measure of 'total stress' (combined scores from the COPSOQ measures). Additionally, figure 2.11 represents, via box plots, the median and interquartile ranges for each of these measures. The results indicate that within the preceding four weeks to completing the measures, respondents report 'seldom or never/hardly ever' experiencing stress as measured by the COPSOQ. The results therefore; show that respondents self report low levels of quantitative stress (e.g. not had the time to relax or enjoy themselves), somatic stress (e.g. had stomach ache or stomach problems), and cognitive stress (e.g. had problems concentrating); and in combination their level of total stress is low.

Table 2.30: Medians and standard deviations for measures of the COPSOQ 'Stress' dimension and the additional measure of 'total stress'.

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total stress
N	Valid	178	179	179	179

	Missing	1	0	0	0
	Median	12.5	12.5	25	20.83
	Std. Deviation	23.22	19.44	23.59	18.59
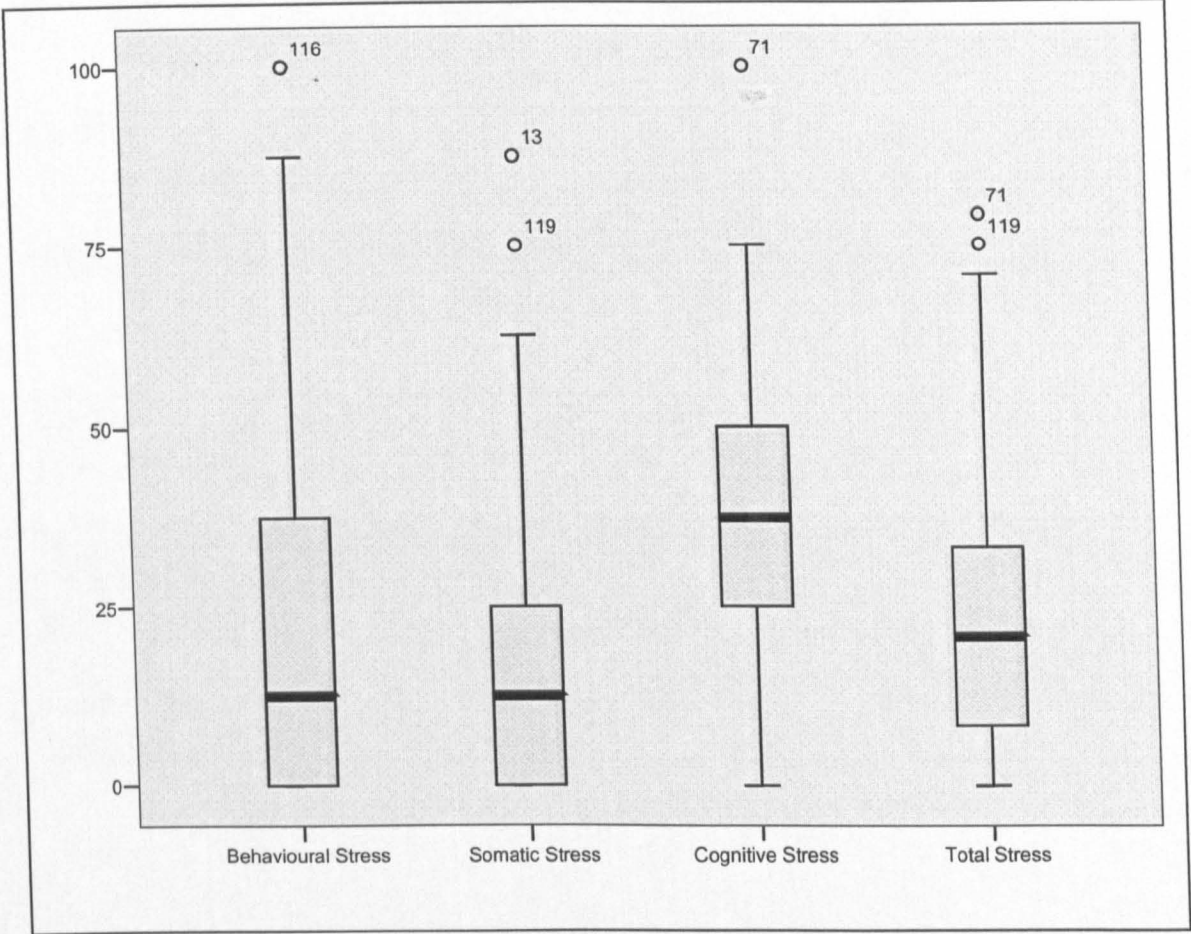
Figure 2.11: Box plots indicating median scores with interquartile ranges for measures of the COPSOQ 'Stress' dimension and the additional measure of 'Total stress'.

Table 2.31 shows the median and standard deviation scores for physiotherapists and occupational therapists on the measures of stress, with the results of the Mann-Whitney U test of difference. Additionally, figure 2.12 represents via box plots, the median and interquartile ranges for all of the measures of stress. The data shows no significant differences in median scores between physiotherapists and occupational therapists for all measures of stress, suggesting that each measure is reported similarly by respondents from each profession.

Table 2.31: Descriptive and inferential statistics for each professional group for measures of the COPSOQ 'Stress' dimension and the additional measure of 'Total Stress'.

	Behaviour al stress	Somatic stress	Cognitive stress	Total stress
Occupational Therapists:				
N Valid	62	62	62	62
Missing	0	0	0	0
Median	12.5	6.25	25	20.83
Std. Deviation	25.47	22.35	23.67	20.23
Physiotherapists:				
N Valid	116	116	117	117
Missing	1	1	0	0
Median	12.5	12.5	50	20.833
Std. Deviation	21.96	17.76	23.58	17.75
Test of Difference between Physiotherapists and Occupational Therapists:				
Mann-Whitney U	3466.500	3597.500	3412.000	3574.000
Z score	-.412	-.095	-.684	-.067
Asymp.Sig. (2 tailed)	.680	.924	.494	.946
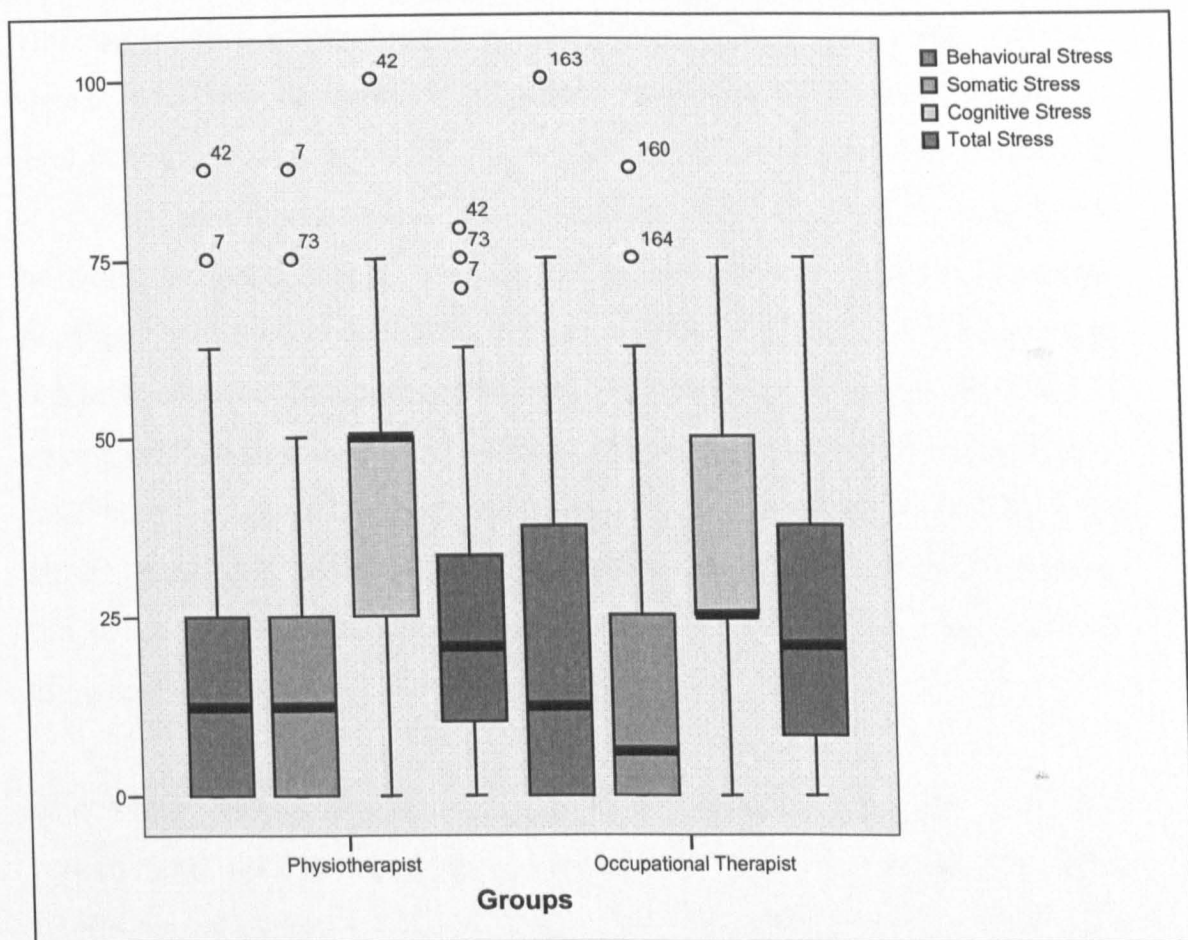
Figure 2.12: Box plots indicating median scores and interquartile ranges for both professional groups for measures of the COPSOQ 'Stress' dimension and the additional measure of 'Total stress'.

Table 2.32 shows Spearman's rho, non-parametric measure of correlation, for all respondents', between the COPOSQ measures of the 'stress' dimension; and the additional measure of 'total stress'. The table shows significant positive correlations between 'behavioural stress' and all two dimensions of stress and the total stress measure (Somatic stress, $r = 0.587$, $p = \leq .001$; cognitive stress, $r = 0.602$, $p = \leq .001$; and total stress, $r = 0.856$, $p = \leq .001$.). The coefficients between 'behavioural stress' and the two dimensions of stress and the 'total stress' measures are strong. These positive values indicates a strong relationship between the measure of 'behavioural stress', and the 'somatic stress' and 'cognitive stress' measures of the 'stress' dimension and the 'total stress' measure, such that as the values for 'behavioural stress' increase, the value for two measures of stress and the total stress measure will increase.

The table shows significant positive correlations between 'somatic stress' and two dimensions of stress and the total stress measure (Behavioural stress, $r = 0.587$, $p = \leq .001$; cognitive stress, $r = 0.481$, $p = \leq .001$; and total stress, $r = 0.756$, $p = \leq .001$.). The coefficient between 'somatic stress' and 'cognitive stress' is moderate, whereas; coefficients between 'somatic stress' and the 'behavioural stress'; and the total stress measures are strong. These positive values indicates a strong relationship between 'somatic stress' and the 'behavioural stress' and 'cognitive stress' measures of the 'stress' dimension and the 'total stress' measure, such that as the values for 'somatic stress' increase, the value for two measures of stress and the total stress measure will increase.

The table shows significant positive correlations between 'cognitive stress' and two dimensions of stress and the total stress measure (Behavioural stress, $r = 0.602$, $p = \leq .001$; somatic stress, $r = 0.481$, $p = \leq .001$; and total stress, $r = 0.873$, $p = \leq .001$.). The coefficient between 'cognitive stress' and 'somatic stress' is moderate whereas; coefficients between 'cognitive stress' and the 'behavioural stress'; and the total stress measures are strong. These positive values indicate a relationship between the 'cognitive stress' measure and the 'somatic stress' and 'behavioural stress' measures of the 'stress' dimension and the 'total stress' measure, such that as the values for 'cognitive stress' increase, the value for two measures of stress and the total stress measure will increase.

The table shows significant positive correlations between 'total stress' and the three dimensions of stress (Behavioural stress, $r = 0.856$, $p = \leq .001$; somatic stress, $r = 0.756$, $p = \leq .001$; cognitive stress, $r = 0.873$, $p = \leq .001$.). The coefficient between 'total stress' and the three measures of 'stress' are strong. These positive values indicates a strong relationship between the 'total stress' measure and the 'behavioural stress' and the 'somatic stress' and 'cognitive stress' measures of the

'stress' dimension, such that as the values for 'total stress' increases, the value for the three measures of stress will increase.

With regards to the measures of correlation, for all respondents', between the COPOSQ measures of the 'stress' dimension; and the additional measure of 'total stress', the strongest significant correlation is observed between the measure of 'total stress and 'cognitive stress', $r = 0.873$, $p = \leq .001$. Whereas; the weakest significant correlation is observed between the measures of 'somatic stress' and 'cognitive stress', $r = 0.481$, $p = \leq .001$.

Table 2.32: Spearman's rho, non-parametric measure of correlation, for all respondents', between the COPOSQ measures of the 'Stress' dimension; and the additional measure of 'Total Stress'.

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Behavioural Stress	Correlation Coefficient	1.000	0.587**	0.602**	0.856**
	Sig. (2-tailed)	.	0.000	0.000	0.000
	N	178	178	178	178
Somatic Stress	Correlation Coefficient	0.587**	1.000	0.481**	0.756**
	Sig. (2-tailed)	0.000	.	0.000	0.000
	N	178	179	179	178
Cognitive Stress	Correlation Coefficient	0.602**	0.481**	1.000	0.873**
	Sig. (2-tailed)	0.000	0.000	.	0.000
	N	178	179	179	178
Total Stress	Correlation Coefficient	0.856**	0.756**	0.873**	1.000
	Sig. (2-tailed)	0.000	0.000	0.000	.
	N	178	178	178	178

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

Table 2.33 shows Spearman's rho, non-parametric measure of correlation, for Physiotherapists', between the COPOSQ measures of

the 'stress' dimension; and the additional measure of 'total Stress'. The table shows significant positive correlations between 'Behavioural stress' and all two dimensions of stress and the total stress measure (Somatic stress, $r = 0.555$, $p = \leq .001$; cognitive stress, $r = 0.584$, $p = \leq .001$; and total stress, $r = 0.842$, $p = \leq .001$.). The coefficient between 'behavioural stress' and the two dimensions of stress and the 'total stress' measures are strong. These positive values indicate a strong relationship between the measure of 'behavioural stress', and the 'somatic stress' and 'cognitive stress' measures of the 'stress' dimension and the 'total stress' measure, such that as the values for 'behavioural stress' increase, the values for two measures of stress and the total stress measure will increase.

The table shows significant positive correlations between 'somatic stress' and two dimensions of stress and the total stress measure (Behavioural stress, $r = 0.555$, $p = \leq .001$; cognitive stress, $r = 0.424$, $p = \leq .001$; and total stress, $r = 0.717$, $p = \leq .001$.). The coefficient between 'somatic stress' and 'cognitive stress' is moderate, whereas; coefficients between 'somatic stress' and the 'behavioural stress'; and the 'total stress' measures are strong. These positive values indicates a strong relationship between 'somatic stress' and the 'behavioural stress' and 'cognitive stress' measures of the 'stress' dimension and the 'total stress' measure, such that as the values for 'somatic stress' increase, the values for two measures of stress and the total stress measure will increase.

The table shows significant positive correlations between 'cognitive stress' and two dimensions of stress and the total stress measure (Behavioural stress, $r = 0.584$, $p = \leq .001$; somatic stress, $r = 0.424$, $p = \leq .001$; and total stress, $r = 0.871$, $p = \leq .001$.). The coefficient between 'cognitive stress' and 'somatic stress' is moderate, whereas; coefficients between 'cognitive stress' and the 'behavioural stress'; and the total stress measures are strong. These positive values indicate a relationship between the 'cognitive stress' measure and the 'somatic

stress' and 'behavioural stress' measures of the 'stress' dimension and the 'total stress' measure, such that as the values for 'cognitive stress' increase, the value for two measures of stress and the total stress measure will increase.

The table shows significant positive correlations between 'total stress' and the three dimensions of stress (Behavioural stress, $r = 0.842$, $p = \leq$ .001; somatic stress, $r = 0.717$, $p = \leq$ .001; cognitive stress, $r = 0.871$, $p = \leq$ .001.). The coefficient between 'total stress' and the three measures of 'stress' are strong. These positive values indicates a strong relationship between the 'total stress' measure and the 'behavioural stress' and the 'somatic stress' and 'cognitive stress' measures of the 'stress' dimension, such that as the values for 'total stress' increase, the value for the three measures of stress will increase.

With regards to the measures of correlation, for Physiotherapists', between the COPOSQ measures of the 'stress' dimension; and the additional measure of 'total stress', the strongest significant correlation is observed between the measure of 'total stress and 'cognitive stress', $r = 0.871$, $p = \leq$ .001. Whereas; the weakest significant correlation is observed between 'somatic stress' and 'cognitive stress', $r = 0.424$, $p = \leq$ .001.

Table 2.33: Spearman's rho, non-parametric measure of correlation, for Physiotherapists', between the COPOSQ measures of the 'Stress' dimension; and the additional measure of 'Total Stress'.

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Behavioural Stress	Correlation Coefficient	1.000	0.555**	0.584**	0.842**
	Sig. (2-tailed)	.	0.000	0.000	0.000
	N	116	116	116	116
Somatic Stress	Correlation Coefficient	0.555**	1.000	0.424**	0.717**
	Sig. (2-tailed)	0.000	.	0.000	0.000
	N	116	117	117	116
Cognitive	Correlation	0.584**	0.424**	1.000	0.871**

Stress	Coefficient				
	Sig. (2-tailed)	0.000	0.000	.	0.000
	N	116	117	117	116
Total Stress	Correlation Coefficient	0.842**	0.717**	0.871**	1.000
	Sig. (2-tailed)	0.000	0.000	0.000	.
	N	116	116	116	116

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

Table 2.34 shows Spearman's rho, non-parametric measure of correlation, for Occupational Therapists', between the COPOSQ measures of the 'stress' dimension; and the additional measure of 'total stress'. The table shows significant positive correlations between 'behavioural stress' and all two dimensions of stress and the total stress measure (Somatic stress, $r = 0.646$, $p = \le .001$; cognitive stress, $r = 0.643$, $p = \le .001$; and total stress, $r = 0.873$, $p = \le .001$.). The coefficient between 'behavioural stress' and the two dimensions of stress and the 'total stress' measures are strong. These positive values indicates a strong relationship between the measure of 'behavioural stress', and the 'somatic stress' and 'cognitive stress' measures of the 'stress' dimension and the 'total stress' measure, such that as the values for 'behavioural stress' increase, the value for two measures of stress and the total stress measure will increase.

The table shows significant positive correlations between 'somatic stress' and two dimensions of stress and the total stress measure (Behavioural stress, $r = 0.646$, $p = \le .001$; cognitive stress, $r = 0.586$, $p = \le .001$; and total stress, $r = 0.812$, $p = \le .001$.). The coefficients between 'somatic stress' and 'behavioural stress', 'cognitive stress' and the total stress measures are strong. These positive values indicates a strong relationship between 'somatic stress' and the measures of the 'stress' dimension and the 'total stress' measure, such that as the values for 'somatic stress' increase, the value for the two measures of stress and the total stress measure will increase.

The table shows significant positive correlations between 'cognitive stress' and two dimensions of stress and the total stress measure (Behavioural stress, $r = 0.643$, $p = \leq .001$; somatic stress, $r = 0.586$, $p = \leq .001$; and total stress, $r = 0.887$, $p = \leq .001$.). All coefficients are strong. These positive values indicate a strong relationship between the 'cognitive stress' measure and the 'somatic stress' and 'behavioural stress' measures of the 'stress' dimension and the 'total stress' measure, such that as the values for 'cognitive stress' increase, the value for two measures of stress and the total stress measure will increase.

The table shows significant positive correlations between 'total stress' and the three dimensions of stress (Behavioural stress, $r = 0.873$, $p = \leq .001$; somatic stress, $r = 0.812$, $p = \leq .001$; cognitive stress, $r = 0.887$, $p = \leq .001$.). The coefficients between 'total stress' and the three measures of 'stress' are strong. These positive values indicates a strong relationship between the 'total stress' measure and the 'behavioural stress' and the 'somatic stress' and 'cognitive stress' measures of the 'stress' dimension, such that as the values for 'total stress' increases, the value for the three measures of stress will increase.

With regards to the measures of correlation, for Occupational therapists', between the COPOSQ measures of the 'stress' dimension; and the additional measure of 'total stress', the strongest significant correlation is observed between the measure of 'total stress and 'cognitive stress', $r = 0.887$, $p = \leq .001$. Whereas; the weakest significant correlation is observed between 'somatic stress' and 'cognitive stress', $r = 0.586$, $p = \leq .001$.

Table 2.34: Spearman's rho, non-parametric measure of correlation, for Occupational therapists', between the COPOSQ measures of the 'Stress' dimension; and the additional measure of 'Total Stress'.

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Behavioural Stress	Correlation Coefficient	1.000	0.646**	0.643**	0.873**
	Sig. (2-tailed)	.	0.000	0.000	0.000
	N	62	62	62	62
Somatic Stress	Correlation Coefficient	0.646**	1.000	0.586**	0.812**
	Sig. (2-tailed)	0.000	.	0.000	0.000
	N	62	62	62	62
Cognitive Stress	Correlation Coefficient	0.643**	0.586**	1.000	0.887**
	Sig. (2-tailed)	0.000	0.000	.	0.000
	N	62	62	62	62
Total Stress	Correlation Coefficient	0.873**	0.812**	0.887**	1.000
	Sig. (2-tailed)	0.000	0.000	0.000	.
	N	62	62	62	62

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

2.9.8 Coping

Response options and scoring for the COPSOQ stress measures:
'Always' (100), 'Often' (75), 'Sometimes' (50), 'Seldom' (25), 'Never/hardly ever' (0).

Table 2.35 shows descriptive statistics (medians and standard deviation) for respondents per each measure of the 'coping' dimension. Additionally, figure 2.13 represents via box plots, the median and interquartile ranges for these measures. The results indicate that when problems arise at work, respondents report 'often' utilising problem focused coping'; 'sometimes' utilising 'selective coping'; and never/hardly ever' using 'resigning coping' strategies. The results therefore; show that respondents self report utilising high levels of

problem focused coping (e.g. try to find out what you can do to solve the problem), moderate levels of selective coping (e.g. think of something else or do something they like), and low levels of resigning coping (e.g. accept the situation because there is nothing to be done about it anyway).

Table 2.35: Medians and standard deviations for measures of the 'Coping' dimension.

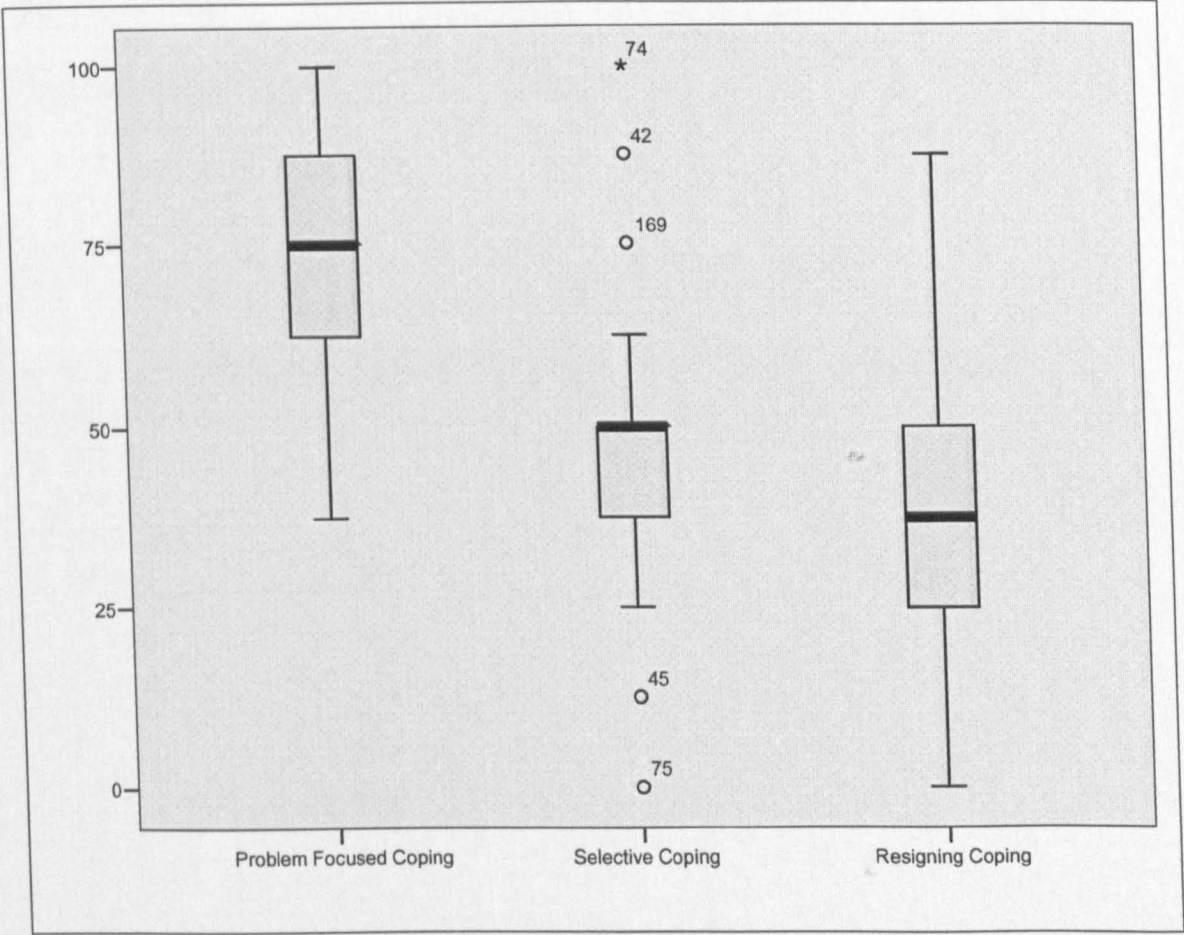|		Problem Focused Coping	Selective Coping	Resigning Coping
N	Valid	179	178	179
	Missing	0	1	0
Median		75	50	37.50
Std. Deviation		16.06	17.48	18.59

Figure 2.13: Box plots indicating median scores with interquartile ranges for measures of the 'Coping' dimension.

Table 2.36 shows the median and standard deviation scores for physiotherapists and occupational therapists on measures of coping,

with the results of the Mann-Whitney U test of difference. Additionally, figure 2.14 represents the median and interquartile ranges for these measures as box plots. The findings show no significant differences in median scores between physiotherapists and occupational therapists for all dimensions of coping, suggesting that each dimension is reported as similarly by respondents from each profession.

Table 2.36: Descriptive and inferential statistics for each professional group for measures of the 'Coping' dimension.

|	Problem Focused Coping	Selective Coping	Resigning Coping
Occupational Therapists:			
N Valid	62	62	62
Missing	0	0	0
Median	75	50	25
Std. Deviation	17.04	13.75	23.67
Physiotherapists:			
N Valid	116	116	117
Missing	1	1	0
Median	75	50	50
Std. Deviation	15.59	15.59	19.18
Test of Difference between Physiotherapists and Occupational Therapists:			
Mann-Whitney U	3537.000	3298.000	3402.000
Z score	-.282	-.934	-.696
Asymp.Sig. (2 tailed)	.778	.350	.486
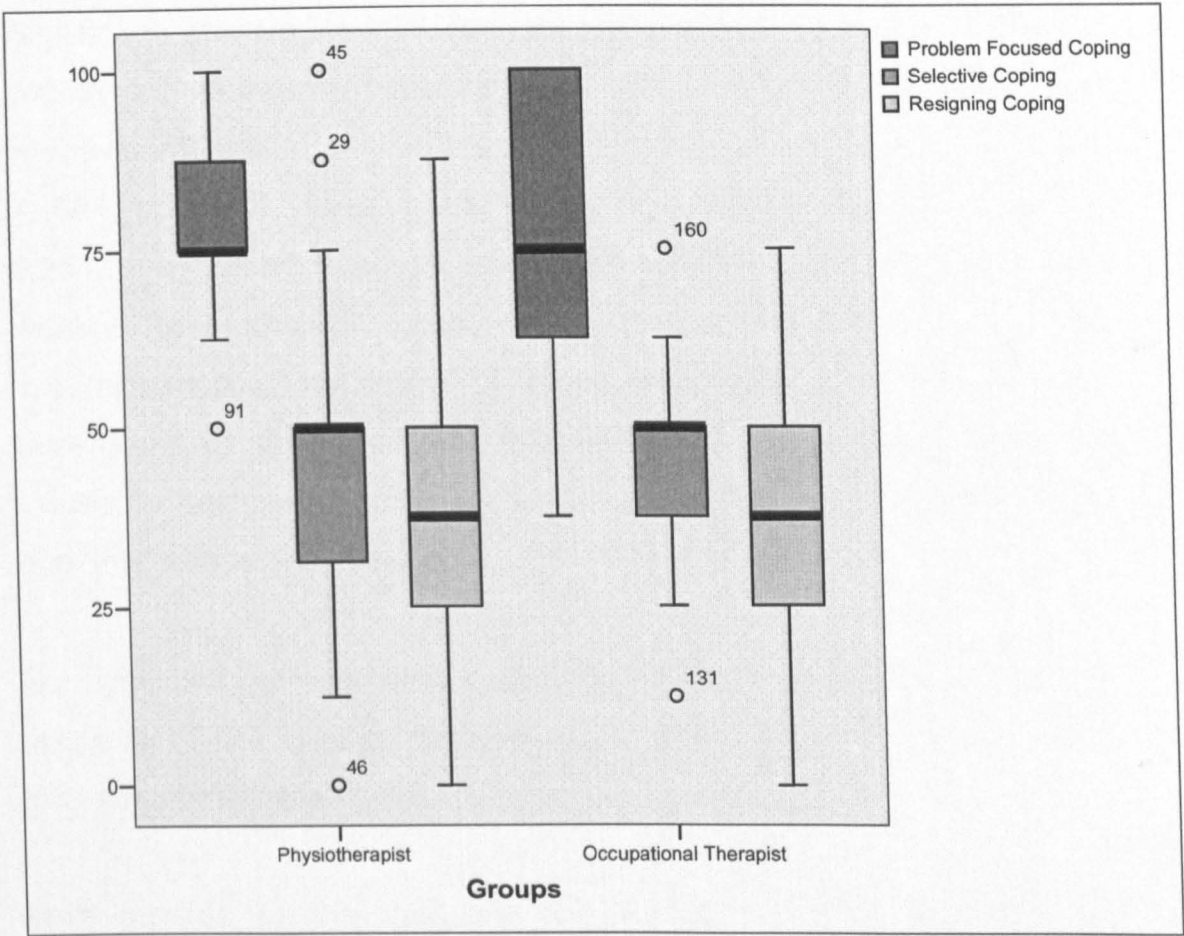
Figure 2.14: Box plots indicating median scores and interquartile ranges for both professional groups for measures of the 'Coping' dimension.

Table 2.37 Spearman's rho, non-parametric measure of correlation, for all respondents', between the COPOSQ measures of 'coping' and 'stress' dimensions; and the additional measure of 'total stress'. Significant negative correlations are shown between 'problem focused coping' and all three dimensions of stress and the total stress measure (Behavioural stress, $r = -0.286$, $p = \leq .001$; somatic stress, $r = -0.201$, $p = \leq .001$; cognitive stress, $r = -0.263$, $p = \leq .001$; and total stress, $r = -0.282$, $p = \leq .001$.). Although statistically significant, the coefficients are weak. These negative values indicate a relationship between the 'problem focused coping' measures of the 'coping' dimension and all three dimensions of stress and the total stress measure, such as that as values for 'problem focused coping' increase, values for the stress dimensions and 'total stress' will decrease.

Significant positive correlations are also shown between 'resigning coping' and all three dimensions of stress and the total stress measure (Behavioural stress, $r = 0.286$, $p = \leq .001$; somatic stress, $r = 0.236$, $p = \leq .001$; cognitive stress, $r = 0.164$, $p = \leq .005$; and total stress, $r = 0.254$, $p = \leq .001$.). Although statistically significant, the coefficients are weak. These positive values indicate a relationship between the 'resigning coping' measures of the 'coping' dimension and all three dimensions of stress and the total stress measure, such as that as values for 'resigning coping' increase, values for the stress dimensions and 'total stress' will increase.

No significant correlations are observed between the 'selective coping' measure of the 'coping' dimension and dimensions of stress and the total stress measure.

With regards to the measure of correlation, for all respondents', between the COPOSQ measures of 'coping' and 'stress' dimensions; and the additional measure of 'total Stress', the strongest significant correlation is observed between the measure of 'behavioural stress and 'resigning Coping', $r = 0.286$, $p = \leq .001$. Although the strongest observed this correlation is weak. Whereas; the weakest significant correlation is observed between 'cognitive stress' and 'resigning Coping', $r = 0.164$, $p = \leq .001$, once again this correlation is weak.

Table 2.37: Spearman's rho, non-parametric measure of correlation, for all respondents', between the COPOSQ measures of 'Coping' and 'Stress' dimensions; and the additional measure of 'Total Stress'.

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Problem Focused Coping	Correlation Coefficient	-0.286**	-0.201**	-0.263**	-0.282**
	Sig. (2-tailed)	0.000	0.007	0.000	0.000
	N	178	179	179	178
Selective Coping	Correlation Coefficient	0.055	0.054	0.014	0.037

		0.469	0.477	0.857	0.626
	Sig. (2-tailed)				
	N	177	178	178	177
Resigning Coping	Correlation Coefficient	0.286**	0.236**	0.164*	0.254**
	Sig. (2-tailed)	0.000	0.001	0.028	0.001
	N	178	179	179	178

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

Table 2.38 Spearman's rho, non-parametric measure of correlation, for Physiotherapists', between the COPOSQ measures of 'coping' and 'stress' dimensions; and the additional measure of 'total stress'. Significant negative correlations are shown between 'problem focused coping' and all three dimensions of stress and the total stress measure (Behavioural stress, $r = -0.296$, $p = \leq .001$; somatic stress, $r = -0.211$, $p = \leq .005$; cognitive stress, $r = -0.270$, $p = \leq .001$; and total stress, $r = -0.293$, $p = \leq .001$.). Although statistically significant, the coefficients are weak. These negative values indicate a relationship between the 'problem focused coping' measures of the 'coping' dimension and all three dimensions of stress and the total stress measure, such as that as values for 'problem focused coping' increase, values for the stress dimensions and 'total stress' will decrease.

Significant positive correlations are also shown between 'resigning coping' and two of the three dimensions of stress and the total stress measure (Behavioural stress, $r = 0.380$, $p = \leq .001$; somatic stress, $r = 0.382$, $p = \leq .001$; and total stress, $r = 0.348$, $p = \leq .001$.). All coefficients are moderate. These positive values indicate a relationship between the 'resigning coping' measures of the 'coping' dimension and two of the three measures of the 'stress' dimension and the total stress measure, such as that as values for 'resigning coping' increase, values for the 'behavioural stress', 'somatic stress' and 'total stress' will increase.

No significant correlations are observed between the 'selective coping' measure of the 'coping' dimension and dimensions of stress and the total stress measure.

With regards to the measure of correlation, for all respondents', between the COPOSQ measures of 'coping' and 'stress' dimensions; and the additional measure of 'total stress', the strongest significant correlation observed, is a moderate correlation is between the measure of 'somatic stress' and 'resigning coping', $r = 0.382$, $p = \leq .001$. Whereas; the weakest significant correlation is observed between 'somatic stress' and 'problem focused coping', $r = -0.211$, $p = \leq .001$, this correlation is weak.

Table 2.38: *Spearman's* **rho, non-parametric measure of correlation, for Physiotherapists', between the COPOSQ measures of 'Coping' and 'Stress' dimensions; and the additional measure of 'Total Stress'.**

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Problem Focused Coping	Correlation Coefficient	-0.296**	-0.211*	-0.270**	-0.293**
	Sig. (2-tailed)	0.001	0.022	0.003	0.001
	N	116	117	117	116
Selective Coping	Correlation Coefficient	0.159	0.162	0.049	0.122
	Sig. (2-tailed)	0.089	0.083	0.598	0.194
	N	115	116	116	115
Resigning Coping	Correlation Coefficient	0.380**	0.382**	0.178	0.348**
	Sig. (2-tailed)	0.000	0.000	0.054	0.000
	N	116	117	117	116

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

Table 2.39 Spearman's rho, non-parametric measure of correlation, for Occupational Therapists', between the COPOSQ measures of 'coping' and 'stress' measures; and the additional measure of 'Total Stress'. Significant negative correlations are shown between the measure of

'problem focused coping' and the measure of 'behavioural stress', $r = -0.255$, $p = \leq .005$; and total stress, $r = -0.253$, $p = \leq .005$.). Although statistically significant, the coefficients are weak. These negative values indicate a relationship between the 'problem focused coping' measures of the 'coping' dimension and all 'behavioural stress' measure of the 'stress' dimensions and the total stress measure, such as that as values for 'problem focused coping' increase, values for 'behavioural stress' and 'total stress' will decrease.

No significant correlations are observed between the 'selective coping' measure of the 'coping' dimension and the 'stress' dimension measures; and the total stress measure, nor between the 'resigning coping' measure of the 'coping' dimension and measures of stress and the total stress measure.

Table 2.39: *Spearman's* rho, non-parametric measure of correlation, for Occupational Therapists', between the COPOSQ measures of 'Coping' and 'Stress' dimensions; and the additional measure of 'Total Stress'.

		Behavioural Stress	Somatic Stress	Cognitive Stress	Total Stress
Problem Focused Coping	Correlation Coefficient	-0.255*	-0.177	-0.247	-0.253*
	Sig. (2-tailed)	0.045	0.170	0.052	0.047
	N	62	62	62	62
Selective Coping	Correlation Coefficient	-0.137	-0.152	-0.052	-0.126
	Sig. (2-tailed)	0.290	0.238	0.691	0.327
	N	62	62	62	62
Resigning Coping	Correlation Coefficient	0.121	-0.013	0.147	0.095
	Sig. (2-tailed)	0.349	0.921	0.255	0.461
	N	62	62	62	62

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

Table 2.40 Spearman's rho, non-parametric measure of correlation, for all participants between the COPOSQ measures of 'problem focused coping' and all measures of the 'work organisation and content of work'

dimension. Although statistically significant, the coefficients are weak, with the exception of the 'possibilities for development' ($r = 0.322$, $p = \leq$ .001), measure which is moderately correlated with problem focused coping. These positive values indicate a relationship between the 'problem focused coping' measure of the 'coping' dimension and all three measures of the 'work organisation and content of work' dimension, such as that as values for 'problem focused coping' increase, values for the 'work organisation and content of work' dimension will increase.

Table 2.40: Spearman's rho, significant non-parametric measure of correlation, for all respondents' between the COPOSQ measure of 'Positive Focused Coping' and measures of 'Work organisation and Content of Work' dimension.

		Influence at work	Possibilities for Development	Meaning of Work	Commitment to the Workplace	Degrees of freedom at Work
Problem Focused Coping	Correlation coefficient	.296**	.322**	.299**	.197**	.232**
	Sig. (2-talied)	.000	.000	.000	.008	.002
	N	179	179	179	179	179

**. Correlation is significant at the 0.01 level (2-tailed)

Table 2.41 Spearman's rho, non-parametric measure of correlation, for all participants between the COPOSQ measures of 'problem focused coping' and measures of the 'interpersonal relationships and quality of leadership' dimension (significant coefficients only). Although statistically significant, the coefficients are weak.

The table illustrates a negative correlation between 'problem focused coping' and 'role conflict' ($r = -0.208$, $p = \leq$ .001) indicating a relationship, such that as values for 'problem focused coping' increase, values for 'role conflict' will decrease.

The remaining positive values indicate a relationship between the 'problem focused coping' measure of the 'coping' dimension and the

measures of the 'interpersonal relationships and quality of leadership' dimension (quality of leadership, r = 0.204, p = $\leq$ .001; role clarity, r = 0.248, p = $\leq$ .001; and predictability, r = 0.202, p = $\leq$ .001), such as that as values for 'problem focused coping' increase, values for the 'interpersonal relationships and quality of leadership' measures will increase.

Table 2.41: Spearman's rho, significant non-parametric measure of correlation, for all respondents' between the COPOSQ measure of 'Positive Focused Coping' and measures of the 'Interpersonal relationships and quality of leadership' dimension.

		Quality of Leadership	Role Clarity	Role Conflict	Predictability
Problem Focused Coping	Correlation coefficient	.204**	.248**	-.208**	.202*
	Sig. (2-talied)	.006	.001	.005	.007
	N	179	179	179	179

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

Table 2.42 Spearman's rho, non-parametric measure of correlation, for all participants between the COPOSQ measure of 'problem focused coping' and the 'cognitive demand' measure of the 'demands' dimension; the 'job satisfaction' measure of the 'work-individual interface' dimension; and the 'mental health' measure of the 'health' dimension. No further significant correlations were found.

Although statistically significant, the coefficients between 'problem focused coping' and 'cognitive demand' (r = 0.288, p = $\leq$ .001); along with 'Mental Health' are weak (r = 0.155, p = $\leq$ .005). Whereas the coefficient between 'problem focused coping' and 'job satisfaction' (r = 0.318, p = $\leq$ .001) is moderate. These positive values indicate a relationship between the 'problem focused coping' measure of the 'coping' dimension and the measures 'cognitive demand', 'job satisfaction' and 'mental health', such as that as values for 'problem focused coping' increase, values for these measures will increase.

Table 2.42: Spearman's rho, significant non-parametric measure of correlation, for all respondents' between the COPOSQ measure of 'Positive Focused Coping' and measures of 'Cognitive demand', 'Job Satisfaction' and 'Mental health'.

		Cognitive Demands	Job Satisfaction	Mental Health
Problem Focused Coping	Correlation coefficient	.208**	.318**	.155*
	Sig. (2-talied)	.005	.000	.038
	N	179	178	179

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

Table 2.43: Spearman's rho, significant non-parametric measure of correlation, for all respondents' between the COPOSQ measure of 'Quality of leadership' and the measures of 'Work organisation and content of work' and 'Interpersonal relationships and leadership'.

		Quality of leadership
Work organisation and content of work		
Influence at Work	Correlation Coefficient	.325**
	Sig. (2-tailed)	.000
	N	179
Possibility of Development	Correlation Coefficient	.311**
	Sig. (2-tailed)	.000
	N	179
Degrees of Freedom at Work	Correlation Coefficient	.280**
	Sig. (2-tailed)	.000
	N	179
Meaning of Work	Correlation Coefficient	.250**
	Sig. (2-tailed)	.001
	N	179
Commitment to the Workplace	Correlation Coefficient	.379**
	Sig. (2-tailed)	.000
	N	179
Interpersonal relationships and leadership		
Predictability	Correlation Coefficient	.269**
	Sig. (2-tailed)	.000
	N	179

Role Clarity	Correlation Coefficient	.370**
	Sig. (2-tailed)	.000
	N	179
Role Conflict	Correlation Coefficient	-.265**
	Sig. (2-tailed)	.000
	N	179
Social Support	Correlation Coefficient	.664**
	Sig. (2-tailed)	.000
	N	179
Feedback at Work	Correlation Coefficient	.286**
	Sig. (2-tailed)	.000
	N	178
Sense of Community	Correlation Coefficient	.380**
	Sig. (2-tailed)	.000
	N	176

**. Correlation is significant at the 0.01 level (2-tailed)

Table 2.44: Spearman's rho, significant non-parametric measure of correlation, for all respondents' between the COPOSQ measure of 'Social support' and the measures of 'Work organisation and content of work' and 'Interpersonal relationships and leadership'.

	Social Support		
Work organisation and content of work			
Influence at Work	Correlation Coefficient	.245**	
	Sig. (2-tailed)	.001	
	N	179	
Possibility of Development	Correlation Coefficient	.349**	
	Sig. (2-tailed)	.000	
	N	179	
Meaning of Work	Correlation Coefficient	.266**	
	Sig. (2-tailed)	.000	
	N	179	
Commitment to the Workplace	Correlation Coefficient	.299**	
	Sig. (2-tailed)	.000	
	N	179	
Interpersonal relationships and leadership			
Predictability	Correlation		.260**

	Coefficient	
	Sig. (2-tailed)	.000
	N	179
Role Clarity	Correlation Coefficient	.365**
	Sig. (2-tailed)	.000
	N	179
Role Conflict	Correlation Coefficient	-.341**
	Sig. (2-tailed)	.000
	N	179
Feedback at Work	Correlation Coefficient	.369**
	Sig. (2-tailed)	.000
	N	178
Sense of Community	Correlation Coefficient	.465**
	Sig. (2-tailed)	.000
	N	176
Quality of Leadership	Correlation Coefficient	.664**
	Sig. (2-tailed)	.000
	N	179

**. Correlation is significant at the 0.01 level (2-tailed)

2.10 Discussion

Physiotherapy and occupational therapy (similar to other healthcare professionals) are characterised by exposure to a wide range of potentially stressful situations and conditions such as, high workloads (CSP survey, May 2004); responsibility for others (Mandy & Rouse, 1997); role-based conflicts (Mandy & Rouse, 1997); lack of support (CSP survey, May 2004; Allen & Ledwith, 1998), and lack professional worth (Bassett & Lloyd, 2001). Consequently, it was speculated, based on previous research, that exposure to potential determinants of stress, along with the pressure of practicing in what is known to be a stressful and constantly changing health care environment may make physiotherapy and occupational therapy professions in the NHS inherently stressful. However, this contention was not supported by the research findings of this questionnaire study.

Results show that respondents self report low levels of quantitative stress (e.g. have time to relax or enjoy themselves), somatic stress (e.g. physical symptoms), and cognitive stress (e.g. no problems concentrating); and in combination their level of total stress is low. Discovering low stress among therapists was unexpected because of the widely held perception that healthcare delivery in the NHS is one of the most inherently stressful. These findings were initially puzzling in light of continuing reports of high stress amongst therapists (CSP, 2004), and increasing stress amongst other NHS professionals (Zellars, Hochwater, & Perrewe, 2000).

However, when the nature of therapists work experience is examined more closely, several possible explanations emerge. If the work experience develops from a synthesis of therapists' perceptions about the work that they do, the organisation they belong to, and the interpersonal relationships that bind these entities together, then the positive perception therapists' hold of these factors have the potential to influence their perception of stress. Work organisation and content of work along with interpersonal relationships and leadership, appear to be important parts of therapists work experience and may place a key part in mitigating the negative effects of known work stressors such as high demands and role conflict.

Demands

The results from this study show that respondents self report high levels of quantitative demands (e.g. having to work very fast), cognitive demands (e.g. having to remember a lot of things), and sensorial demands (e.g. work requiring a high level of precision) and moderate levels of emotional demands (e.g. becoming emotionally involved in work), and demands for hiding emotions (e.g. having to hide feelings). The working environment of therapy departments are unique, complex and dynamic environments. This is reflected in the varying, and often high volume of patients seen as well as the range of acuity of clinical encounters. These conditions of time pressure, high cognitive demand,

clinical precision and emotional involvement with patents are perceived by therapists as demanding, but not it seems as excessively burdensome.

What is it about therapist's work that necessitates high demands unrelated to stress? High quantitative demand is perhaps unavoidable in such a 'specialised' sector of the NHS. It is conceivable that perceptions of high quantitative demand go hand-in-hand with perceptions of what it is to be a clinical practitioner, particularly an autonomous practitioner. Professional autonomy entails greater responsibility. Autonomy indicates that a therapist has the ability to validate personally their own practice and decision making process. Therefore, therapists have the responsibility to articulate their own scope of practice and the limits of that scope within the broad terrain of their profession, providing perhaps, a buffer against the negative connotations of high demand as a consequence of work.

The emotionally demanding nature of health-care work has been increasingly recognised (Janiszewski Goodin, 2003; Bakker et al, 2000; Le Blanc et al, 2001), and it is clear that working as a therapist comprises interactions with patients which, result in high level of emotional demand. Interestingly however, analysis reveals that emotional demand is not associated with stress. This is due perhaps, to the nature of the therapeutic relationship between therapist and patient. Physiotherapy and occupational therapy are professions that adopt a rehabilitative approach, to achieve best quality of life, shifting the focus from a preoccupation with the disease to one that is led by the needs of the patient. Wherever possible therapists establish achievable goals with patients and their families (ACPOPC, 1993). Studies have shown that patients perceive therapy treatment as a hopeful event. They see such treatment as leading to increased activity and an increased sense of well being, with opportunities to attain functional independence (McDonnell & Shea, 1993; Robinson, 2000). Therapeutic relationships in rehabilitative settings are an active rather than passive process. The

therapist is striving to help a patient proactively achieve therapeutic goals, in doing so they can exercise their skills, judgment, and intelligence, to solve clinical problems, and improve achievable patient outcomes. Relating therapeutically with patients may therefore, be a source of professional fulfilment rather than a source of stress.

High levels of cognitive demand unrelated to the outcome of stress, suggest that the work-environment of therapists is perceived by them as intellectually stimulating. In the same way, Konrad et al (1999) propose that appropriate intellectual stimulation at work is an important facet of job satisfaction and Karasek and Theorell (1990) theorise that "active jobs" (the combination of high demands and high control) result in challenging but stimulating work situations with no particular risk for stress or ill-health.

Work-related demand is a feature of work that has received substantial empirical attention and it has been established that job demands do not necessarily have to be detrimental. Demands can be positive in the right circumstances (e.g. utilising abilities), when they remain between certain proportions or only occur in certain circumstances, job demands even might contribute to employees' well-being (Warr, 1987). However, this implies that in certain circumstances work-related demands can have a negative impact on perceptions of stress. This contention corresponds with the findings from this present study. Correlation analysis (table 2.6) indicated weak to moderate positive relationships between the quantitative demand and all three measures of the 'stress' dimension and the 'total stress' measure. In addition to a weak positive relationship between 'demands for hiding emotions' and the 'behavioural' dimension of stress and 'total stress'.

The positive relationships would normally indicate that higher levels of work-related demands (quantitative and demands for hiding emotions), would result in increased stress. The weak coefficients on the other hand, imply that changes in demand would have only minimal effect, on

how therapists see their levels of stress. While the correlations between quantitative demand and demand for hiding emotion and measures of stress are weak, this is in keeping with findings in the literature that indicate that highly skilled and motivated workers maintain high levels of performance in the presence of a variety of stressors.

What are the reasons therapists in this study may (under certain circumstances) find particular demands stressful. Firstly, quantitative demand is a known determinant of stress and there exists a vast amount of research to support its dependant relationship with stress (as discussed in the introduction section of this chapter). As reviewed, healthcare workers often face excessive stress due to the nature of their jobs (Edwards et al, 2000; Coffey et al, 2004). When these work-specific conditions are considered excessive to the individual, it will impact upon the individual's health and effectiveness in the workplace and their perceptions of the workplace generally.

Secondly, in the UK there is currently a nationwide shortage of therapists, meaning that there are not enough experienced physiotherapists and occupational therapists in post (The Department of Health Vacancies Survey (England) March 2003; The 2004 Local Authority Workforce Survey), consequently staff shortages, high caseloads, and periods of increased activity are typically prevalent in therapists work, and may be some of the 'profession specific' factors that contribute to the finding of a positive relationship between quantitative demand and stress. A further 'profession specific' explanation (informed by in-depth qualitative interviews conducted with therapists: chapter 3), may be that therapists work is based to large degree on self-management and independence (including in relation to prioritising tasks); where the direct patient care activity workload is largely determined by the therapist. This provides a great deal of autonomy and freedom on the one hand, but on the other may make it difficult to know or determine exactly when patient load is balanced with indirect patient care activities (activities which support or supplement

the diagnosis, evaluation, treatment of a specific patient) and non-patient departmental activities.

Emotion management is a prominent feature of organisational life in the human services, and the concept of 'emotional labour', defined as "the effort, planning and control needed to express organisationally desired emotion during interpersonal transaction" (Morris & Feldman, 1996, p. 987), is thought to have negative outcomes for the worker. Frequently or constantly maintaining organisationally mandated emotions leads to stress (Mann, 1999). In this regard, it was not surprising that high demand to engage in emotional labour (i.e. hide emotions) was associated, albeit weakly with stress.

Correlational analysis has revealed that job demands (as measured by the COPSOQ) are related to work-related stress. However, as with previous research (Demerouti, Bakker, Nachreiner & Schaufeli, 2001; Taris & Feij, 2004), results from this current questionnaire study demonstrate that job resources acquired through work organisation and content of work (e.g. having well-defined possibilities for development) and interpersonal relationships and leadership (e.g. adequate social support) may offset or protect against deleterious effects of the relationship between job demands and the outcome of stress.

Work organisation and content of work

The results from this study show that respondents self report high levels of possibilities for development (e.g. possibility of learning new things through work), meaning of work (e.g. feeling motivated and involved in their work), and commitment to the workplace (e.g. feel that their place of work is of great personal importance to them). In summary, these high scores reach a consensus: therapists feel positive about their work organisation and content of work, thus perceive themselves as enabled, motivated and committed.

Issues relating to "possibilities for development" within an organisation are frequently cited as major sources of dissatisfaction and work-related stress (Cooper et al, 2001). Conversely, it stands to reason that opportunities for personal development may contribute to feelings of satisfaction. Personal development in the workplace has been identified as a motivating factor linked to increased job satisfaction and increased their efficiency (Herzberg, 1966).

The "meaning of work" concept can be defined as the significance therapists' attributes to work, their representations of work, and the importance it has in their life. For work to be meaningful, it should also be enjoyable. For this to occur, it should correspond to an employee's field of interest, utilise skills, stimulate potential, and effectively enable the achievement of objectives. Additionally, it should be performed in an environment that stimulates the development of skills and judgment. When an individual does meaningful work, they develop a sense of identity, worth, and dignity. By achieving meaningful results, the employee actually achieves himself, grows, and even, actualizes his full potential (Morin, 2004). As such, the perception of meaningful work has the potential to enhance the quality of the work experience for respondent therapists (Polanyi & Tompa, 2002). This is consistent with the "person-environment fit" model (Caplan & Harrisin, 1993) that suggests that stress and ill-health results when there is a mismatch between an individual's abilities, needs, motives, goals and behaviour patterns', and a given job's demands, resources, opportunities and rewards. Therapist's perception that their work is meaningful implies that they have good "person-environment" fit and that their work is meaningful, important and relevant for them.

Holbeche & Springett (2004), state that in the workplace, "meaning" appears to be linked to a higher sense of work-commitment. It also links to consistency of behaviour and congruence between personal and organisational values. The Roffey Park Institute report (2004) indicates a clear link between employees experiencing meaning and greater

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employee engagement and commitment. Correspondingly, therapists in this present study, alongside 'meaning' also self-report high levels of commitment to their work.

Besides main effects of organisational commitment on stress, two competing hypotheses have postulated moderating effects of commitment on the relationship of work stress to measures of stressors. According to the first hypothesis highly committed employees experience the adverse effects of stress more than less committed employees, whereas according to the second hypothesis commitment operates as a buffer in the stressor-stress relationship. Results from this study appear to support the contention forwarded by the second hypothesis.

Interpersonal relationships and leadership

Research on role conflict (e.g. having contradictory demands placed on them at work) has shown that it is a negative state associated with work-related stress. Correspondingly, the results from this study show respondents report moderate levels of role-conflict significantly associated with behavioural stress (Add correlation). Nevertheless, as previously discussed, respondents do not report high levels of work-related stress. This finding may be explainable in light of the reported high scores on 'role-clarity' (e.g. knowing exactly what is expected of them at work), along with moderate scores on 'predictability' (e.g. receiving all the information needed in order to do work well), 'social relations' (e.g. talking to colleagues whilst working) and 'feedback at work' (e.g. receiving feedback from manager about how well work is carried out).

High scores on role clarity refer to the extent to which employees understand job expectations, the process for fulfilling these expectations, and the consequences of their role performance. Bliese & Castro (2000) extended the demands-control-support model to hypothesise that role clarity, like control, would moderate the

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relationship between work-related demands and stress (psychological strain). Second, the study assessed support (from leaders) as a macro characteristic of the work-group environment. Data were drawn from a large study of US army soldiers (n=1786 male soldiers). As predicted, the relationship between demands and stress was moderated by role clarity; however, this moderating relationship was found only when work-group support was high. The finding of moderate scores on "predictability and feedback at work" in this current questionnaire study indicate that respondent's feel that their manager has clearly communicated their expectations about work goals and responsibilities, and moderate scores on social relations suggests that there is clear and sufficient communication amongst therapists whilst working. Clear work-related goals matched with accountability and communication is a key element of employee satisfaction (Wellins et al, 2009) and may be further facets of the overall explanation as to why in the presence of determinants of stress, such as role conflict, therapists do not perceive themselves to be stressed as a consequence of work.

Previous research has explored the impact of leadership on stress. Effective leadership has been shown to have a preventive and protective function for those under their leadership. Theorists have long argued that supportive leadership is critical in situations of high work-related stress (House & Mitchell, 1974). Leader support has been shown to have an inverse relationship with subordinate stress and has also been found to greater subordinate job satisfaction, as well as buffer the effects of job demands on both stress and job dissatisfaction (Karasek, Schwartz, & Theorell, 1982).

However, the results of this study suggest that perceptions of leadership are not related to the degree of behavioural, somatic and total stress experienced by therapists (see table 2.17). Although, examination of correlational results provides other interesting information. Therapists showed stronger relationships between perceptions of leadership and their perceptions of all measures of the 'work organisation and content

of work' and 'interpersonal relationships and leadership' dimensions of the psychosocial work environment, than their perceptions of stress (see table 2.43.). Given that reported stress levels were low for this sample, this does not appear to be due to the amount of stress experienced but rather may be due to a dependence of on their manager for the provision of leadership behaviours that moderate or reduce stress.

The present results show respondents report high levels of both social support and sense of community. Hence it would appear that therapists' have the support of their colleagues alongside their manager when they face difficulties or problems. It can be concluded perhaps that respondents work in environments that stimulates the development of positive professional relationships: theirs is a job that enables good relationships with others and the ability to communicate frequently and effectively with one's co-workers. Social support is a significant feature of an individual's social environment. Recent attention has turned to examining the role of social support in the stress process in two ways. The first has been to reconceptualise social support as coping assistance (Thoits, 1986). In this view, the coping methods utilised by an individual in response to stressors are seen as the same methods utilised by others to assist that individual. For example, problem-solving coping on the part of the individual and instrumental support from others are both aimed at modifying or managing the stressful situation. If this is the case, social support should enhance the utilisation of active coping by respondents when confronted with stressful circumstances.

A second way that social support may operate in the stress process is to reduce the perception or experience of work stressors and, therefore, indirectly reduce the likelihood of negative outcomes such as psychological symptoms. Just as active coping may serve to mediate the effects of social support on symptoms, work stressors may also operate as another mediating pathway. Support for this hypothesis is found in several studies in which greater perceived social support was

related to lower levels of reported work stressors (Griffith et al, 1999; Jayaratne, Himle, & Chess, 1988; Kumari & Sharma, 1990; Pompe & Heus, 1993). This present study found that exposure to various psychosocial work-related factors (table 2.44) was significantly associated with perceived social support. Perceived social support was further significantly associated with stress, thus potentially suggesting both a direct and mediating role for perceived social support.

On the whole, there is a basis to conceptualise social support as an important contextual variable that may influence respondent therapists' utilisation of active coping strategies and their perceptions of work stressors.

Work-individual interface

Respondents report high levels of satisfaction with their profession. Therapists' sores on job satisfaction (table 2.20) suggest that the therapy professions are intrinsically attractive.

Job satisfaction, a worker's sense of achievement and success, is generally perceived to be directly linked to productivity as well as to personal wellbeing. Job satisfaction implies doing a job an individual enjoys, doing it well, and being suitably rewarded for their efforts. Job satisfaction further implies enthusiasm and happiness with work. The Harvard Professional Group (1998) sees job satisfaction as the key ingredient that leads to recognition, income, promotion, and the achievement of other goals that lead to a general feeling of fulfilment. Frequently, work underlies self-esteem and identity while unemployment lowers self-worth and produces anxiety. At the same time, monotonous jobs can erode a worker's initiative and enthusiasm and can lead to absenteeism and unnecessary turnover. As such, job satisfaction is a major factor in personal satisfaction, self-respect and self-esteem. The mechanism and pathway to explain by which means psychosocial exposures affect the self-development of therapists should be the object of more theorisation and testing in the future; particularly

as judging therapists' ratings of satisfaction with possibilities for development, the professions have managed to establish a career and organisational structure that facilitates career development.

Ramirez and colleagues (1996) investigated the mental health of hospital consultants and observed that job satisfaction significantly protected consultants' mental health from the effects of job stress. It is suggested that the sense of satisfaction that the subject finds in his relationship to work gives him a sense of psychological security which helps him to cope with the challenges that are inevitably involved in performing duties (Antonovsky, 1987), and may be a further explanation for (or even perhaps a consequence of) the finding, for physiotherapists at least, of low stress as a outcome of work amongst this sample. It is interesting to note that previous research has shown that satisfaction with work outweighs any anxieties occupational therapists may have associated with professional role, status and identity (Lloyd & Bassett, 2001). In this present study; although no significant difference was found between physiotherapists and occupational therapists self report scores on job satisfaction (both groups reported high satisfaction), occupational therapists did not show a relationship between perceptions of job satisfaction and measures of perceived stress (Table....). The results suggest that it is not perceptions of work-related stress that creates a satisfying or unsatisfying work experience for occupational therapists, but the work itself and the psychosocial work environment that lead to perceptions of job satisfaction.

In summary, exposure to determinants of stress (such as high demands and role conflict) in and of itself does not as fully account for negative outcomes such as stress; as determinants can be managed, and may even be beneficial if other positive factors are also operative (e.g., fair reward for efforts). This present study suggests that when stress determinants are experienced and other enabling or motivating aspects of work such as possibilities for development, role clarity and job satisfaction are present, the effects of stressors can be balanced or

counteracted. This indicates that preventing and reducing stress is not just about eliminating the negative but promoting and encouraging positive aspects of work experience.

Coping

A further explanation to that of situational resources as potential buffers against the impact of perceived stressful encounters on professional quality of life, relates to the utilisation of coping strategies. In this study, three broad categories of coping strategies are measured: problem-focused coping (i.e. active efforts to manage or control aspects of the stressful event such as problem-solving, cognitive restructuring, and seeking social support); avoidance coping (i.e. selective efforts to avoid the stressful situation or thinking about the stressful event); and resignation coping (unresisting acceptance of a stressor or situation as inescapable).

The results indicate that when problems arise at work, respondents report 'often' utilising 'problem focused coping', 'sometimes' utilising 'selective coping', and never/hardly ever' using 'resigning coping' strategies. Analysis indicates (table 2.37) a weak negative relationship between the 'problem focused coping' measure of the 'coping' dimension and all three dimensions of stress and the total stress measure. No significant correlations are observed between the 'selective coping' measure and dimensions of stress and the total stress measure. Whereas, a weak positive relationship was established between the 'resigning coping' measure of the 'coping' dimension and all three measures of stress, and total stress.

In this present study, in coping with work-related stress, therapists tend to use two of the three coping strategies however, only problem-focused coping is beneficially related to reducing stress. Sweeny and Nichols (1996) concluded from a review of earlier research, that OT's may be particularly skilled at protecting themselves from stressors. They cite a study by Rees and Smith (1991) which found that whilst OT's rated as

one of the most pressured of all health service cohorts, they were one of the most adept at utilising positive coping strategies. In accordance with this finding Lloyd and Basset (2001) more recently concluded from their review of the research that the positive coping strategies employed by OT's may be central in reducing their levels of stress.

In the case of problem-focused coping, there is substantial research indicating that it functions as a protective factor, either through its direct positive effects on outcomes or as a moderator of the stressor-symptom relationship. In this instance, significant inverse relationships between problem focused coping and all measures of stress were reported, suggesting that problem focused coping offsets the negative effects of psychosocial stressors by contributing directly to decreased stress. Similarly, a number of cross-sectional analyses have demonstrated direct effects of problem-focused coping, either through a negative relationship to stress, or a positive relationship to indices of increased adjustment (Decker & Borgen, 1993; Ingledew et al, 1997; Kirkcaldy et al, 1995; O'Neill & Zeichner, 1985; Parkes, 1990; Shinn et al, 1989; Srivastava & Singh, 1988; Whatley et al, 1998). However, contrary to predications Day & Livingstone (2001) found no relationship between problem-focused coping strategies and psychological symptoms.

In examining the direct effects of problem-focused coping Snow (2003), states that previous research has shown that the use of these coping strategies operates relatively independently of work stressors (i.e. problem-focused coping does not serve as an indirect or mediating pathway between stressors and the outcome of stress). The preponderance of evidence shows that correlations between job stressors and problem-focused coping are not significant (Bhagat et al, 1991; Griffith, Steptoe, & Cropley, 1999; Ingledew et al, 1997; Parkes, 1990; Shinn et al, 1989). When significant correlations are observed (Day & Livingstone, 2001; Frone et al, 1991; Kirkcaldy et al, 1995; Nelson & Sutton, 1990), they tend to be relatively modest and are not consistently positive or negative. In addition to the direct relationship

between problem focused coping and stress, this present study also observed low to moderate correlations between problem focused coping and numerous measures of psychosocial dimensions (tables 2.40; 2.41; 2.43). Many factors may contribute to the nature of these relationships. Certain stressors may not influence problem-focused coping while others may be differentially predictive of greater or lesser utilisation of this type of coping strategy. For example, Day and Livingstone (2001) found that among four chronic work stressors assessed, role overload and role responsibilities were positively correlated with problem-focused coping, while lack of job stimulation and work-role ambiguity were negatively correlated with it.

In contrast, several studies indicate that avoidance coping may serve to mediate the effects of stressors on the outcome of stress. First, as was the case in this present study, stress levels have been shown to be positively related to use of avoidance (resigning) coping strategies (Ingledew et al, 1997; Koeske et al, 1993; Shinn et al, 1989). Second, there is also strong and consistent evidence (Day & Livingstone, 2001; Felsten, 1998; O'Neill & Zeichner, 1985; Pisarski et al, 1998; Srivastava & Singh, 1988; Tyler & Cushway, 1995; Aspinwall & Taylor, 1992; Ingledew et al, 1997; Koeske et al, 1993) that avoidance coping is predictive of increased symptoms and poorer adjustment. Moreover, one study found that these effects were more likely to occur for those who used avoidance coping strategies predominantly or exclusively (Koeske et al, 1993). The results of these studies strongly suggest that avoidance coping operates as a mediator in the stressor- stress relationship. In this current study, significant correlations between resigning coping and various measures of the dimensions of 'work organisation and content of work', 'interpersonal relationships and leadership', and 'job satisfaction' are suggestive of potential mediating effects of resigning coping.

In summary, the role that coping plays in the stressor-stress relationship proves to be quite complex, and the nature of this relationship appears

to vary by type of coping. However, it can be concluded that within the context of this present study, problem focused coping either through a direct effect on stress and/or as a mediator of the stressor-stress outcome relationship, most likely functions as a protective factor that buffers the impact of perceived stressful encounters on the outcome of work-related stress.

Health

The results show that respondents self report high levels of general health (e.g. are as healthy as anybody they know), and moderate levels of mental health (e.g. felt calm, peaceful and happy) and vitality (e.g. have a lot of energy).

Stress has slowly been accepted as a mainstream cause of work related ill health. Research to date has not established a direct causal link, but extensive research does indicate an relationship between psychosocial work-related stress and ill-health (psychological and physical), with employees of the NHS being found to be particularly vulnerable to the ill-health effects of stress, compared to the general population (Royal College of Nursing, 2005). According to this present study, work-related stress is moderately correlated to perceptions of health (table 2.27). However, in consideration of the low scores on work-related stress, it is perhaps not surprising that respondents report that within the preceding four weeks to completing the 'health' measures, their 'general health' was 'very good'; their 'mental health' good, and their 'vitality' evident 'a good bit of the time'.

A healthy work environment is the totality of all factors that influence satisfaction, for this sample, this includes the way work is organised and the content of work, leadership style, employee autonomy and control, and social support. It is reasonable to conclude that for participating therapists, the psychosocial work environment does not pose any significant threats to their overall health.

Theories

Applying the theories discussed earlier in this chapter, it is clear that findings from this study appear to support theoretical conjectures that abridge the predominant theories of work-related stress. That being if work provides the right mix of work-related characteristics work can be a positive experience that has the potential to stimulate an employee's work-related engagement and promote good health as well as job satisfaction.

This study has established that for participating NHS therapists the 'right' mix of work characteristics are an acceptable level of demand; control at work (which includes influence at work and degree of freedom at work) meaning of work, commitment to work, and possibilities for development; good interpersonal relationships; job satisfaction and utilisation of positive coping strategies. All of these psychosocial factors are experienced by therapist as 'something other' than stressful.

In recent years, attempts have been made to synthesise elements from the predominant theories of work-related stress to form a more unified paradigm for understanding workplace stress. Perhaps the best example of this theoretical work is job demands-resources (JD-R) model. The results of this present study are particularly consistent with the job demands-resources (JD-R) model which, hypothesises that job related resources are most likely to be among the characteristics that result in motivational outcomes such as work engagement and job satisfaction. Job resources are those aspects of the work context that buffer job demands and reduce their physical and psychological costs, and are functional in achieving work goals and stimulating personal growth, development and learning (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). For respondent therapists in this present study, job resources valuable in buffering the negative consequences of job demands and also seemingly important for employee's well-being, are those acquired through work organisation and content of work (e.g.

having well-defined possibilities for development) and interpersonal relationships and leadership (e.g. adequate social support).

2.11 Conclusion

The overall objective of this study was to clarify whether a) core psychosocial stressors and b) structural and social resources to counteract stress (as identified by accumulated evidence in occupational stress literature and by consensus amongst the theoretical literature) are also determining factors for NHS therapists' self-reported experience of work-related stress. And c) to ascertain the relationship between work-related stress and therapists self-reported health.

The assumption that therapists may experience stress as a consequence of their psychosocial environment is grounded in a vast literature on work-related stress demonstrating that stress is endemic in the human services. Overall the literature convincingly demonstrates that stress is a long-standing problem for healthcare professionals in the NHS irrespective of type of training, area or type of clinical or nonclinical work (Aiken et al., 2002b; Allen et al., 2002; Cox & Leiter, 1994). However; the assumption that respondent therapists may experience stress as a consequence of their psychosocial work environment has not been supported. The evidence from this study does not indicate that the psychosocial work environment of participating therapists is perceived as stressful. Results suggest that therapists are managing to avoid or minimize their experience of stress. This study suggests that exposure to stressful working conditions, such as high demands (and other positively related to stress) has the potential to have a direct influence on therapists experience of stress and subsequently health outcomes. However, individual and situational factors intervene to weaken this influence. This study is in keeping with findings in the literature (Demerouti et al, 2001; Schaufeli & Bakker, 2004) which indicate that individual and situational factors can modulate the effects

of work-related stressors in different ways: they can decrease or completely deflect them.

Understanding whether and under what conditions work stressors contribute to the outcome of stress and negative psychological and physical health outcomes continue to be an important emphasis for workplace research. This study is important for a number of reasons. Prior to this study, there was little, if any, empirical focus on the effects of stress upon professions allied to medicine in the NHS. Certainly, it represented the first empirical study examining these factors employing a sample of physiotherapists and occupational therapists. As such, it is unique, and was a timely exploration of the possible relationship between psychosocial factors and work-related stress, and how workers in this field experience these. It provided further empirical data to the knowledge base about the psychosocial work-related stress among healthcare professionals, and contributed to the theoretical model forwarded by Demerouti and colleagues (JD-R), by demonstrating that psychosocial related resources are most likely to be amongst the characteristics that buffer against work-related stress within this population. Overall, the results provided some valuable insight into the prevalence, nature and experience of stress across the sample and it helped to delineate those risk and protective factors that might be the focus of preventive interventions in therapists' workplace.

2.13 Limitations

This study had one main limitation. Because we relied on self-reported data from employees participating in a large voluntary survey disseminated independently and voluntarily by their Trust, there was no control over the sampling frame, therefore the results may have been subject to recall or selection bias. The response rate cannot be calculated for this reason also, since we do not know the number of employees who received this survey in totality.

Further limitations are firstly, that questions about work stress were asked only of people who were currently employed and able to go to work. No information was collected about individuals whose stress or health problems were serious enough to prevent them from working at the time of the survey. Therefore, the observed relationship between work stress and outcomes is likely weaker than it would be if those who were not able to work because of stress or illness had been included. Secondly, the study was designed to confirm only those psychosocial determinants specific to the working practice of therapists. Excluded factors external to this, but that may have an impact on the stress experienced at work, are home-work interface and wider organisational factors. And finally, in this study, we focused specifically on physiotherapists and occupational therapists, and therefore the findings are highly relevant for this particular group. To increase generalization across settings, participants were sampled across trusts.

Over all, limitations aside, the results from this present study are noteworthy and provide challenges for future research and cross-validation in different professional settings.

2.14 Further Research

Apart from the conditions of the psychosocial environment, the outcome of the stress process is also affected by an individual's beliefs and attitudes towards those conditions (Hsieh et al, 2004). Dewe, Cox, & Ferguson (1993) questioned the assumption that the perceived presence of a potential stressor equates with an individual being under stress, and advised researchers to give more attention to the subjective meaning an individual gives to events. Applying this way of thinking to the experience of stress as a consequence of work as a therapist, it is necessary, as Kristensen et al (2005) point out, to study how therapists live with stress in their daily work lives. Stress research could make substantial progress by examining "life as it is lived" (Bolger, Davis, &

Rafaeli, 2002, p. 579) and by analysing the situational features and individual interpretations associated with the experience of stress.

Therefore, the next study to be presented in this thesis is an investigation of meaning applied by therapists to the experience of work-related stress and thereby adding qualitative depth to the objective of this research; which is to describe and understand the psychosocial environment and nature of work-related stress of NHS therapists.

CHAPTER THREE: Physiotherapists and occupational therapists perceptual experiences of the psychosocial work environment and personal meanings prescribed to the experience of work-related stress.

Abstract

Background: An extensive literature has been published about the environment in which health professionals work and the impact of the psychosocial work environment on the individual's well-being. However, in the fields of physiotherapy and occupational therapy, studies into the environment have been conducted primarily to evaluate the impact of the therapeutic environment on the provision of care to patients. How therapists understand their psychosocial work environment and experiences of stress as a consequence of their work is important, such lay representations provide a framework for understanding what therapists are making reference to when they perceive themselves to be experiencing work-related stress. **Aim:** The goal of the present study was to develop an in-depth understanding of therapists' representations of their psychosocial working environments and the nature of work-related stress within this context, its psychosocial antecedents and protectors, and outcomes. **Methods:** The research conducted utilised an in-depth interview methodology (n=10). Analysis was constant comparative. **Findings:** The study yielded a wealth of rich qualitative data. The findings indicate that the work environment of therapists is perceived by them to contain psychosocial stressors and that it is the organisational structure of the work that plays the most consistent role in the development of stress. Social support and a strong profession specific identity were found to provide an important buffer against the negative effects of work-related stress. **Conclusion:** Fundamental changes in the organisation, management, and delivery of health care have added new stressors to therapists and have given rise to the challenge of redefining their professional and organisational identities. Financial constraint, target-driven care and consumerism in health care are factors that are perceived to have fundamentally changed the role of therapists and their reporting of experiencing work-related stress.

3.1 Introduction

A majority of the studies that have been conducted in the area of work-related stress have been performed with traditional surveys and scales, for example the preceding questionnaire survey (Chapter 2). These methods have advantages as they are efficiently administrated and their reliability and validity are often expressed. The disadvantages are that they do not capture experiences that are unique to the specific situation (Narayanan, Menon and Spector, 1999). Several authors point out the need for alternative approaches such as using qualitative methods to study stress at work (Cooper, Dewe and O'Driscoll, 2001; Dewe, 2000).

Qualitative research strives to provide rich information about the experiences and meaning of stress that cannot be captured through standardised measures. Qualitative research falls within the context of discovery rather than verification, aiming for deeper understanding of the explanations and descriptions provided by participants. With its emphasis on lived experience, an important feature of qualitative enquiry is its potential to add to the current level of understanding of stress by providing detailed information and greater insight concerning how employees behave, think and make meaning of work-related stress.

Research suggests that people are more likely to attribute the experience of stress to being caused by the work environment than any other domain of life (McCormick, 1997). Despite this however, Kinman and Jones (2005) explain that a great deal more insight has been gained into individuals explanatory models of life stress and health than work-related stress. They argue that further investigation is needed of how people make sense of their wellbeing in relation to their work, and in order to do so, representations should be elicited that are restricted to the workplace. In order to address the knowledge imbalance Kinman and Jones (2005) themselves, conducted a qualitative enquiry of employee lay representations of work-related stress. Using semi-

structured interviews they interviewed 45 individuals form a range of occupations. They found that lay representations of work-related stress were complex and multifaceted. Participants referred to a diverse array of personal, environmental and social factors when defining the concept and placed differing weighting on the role these factors play in the determination and outcomes of stress. The causes of work-place stress were perceived as being primarily organisational but the impact of work-related stress was perceived to affect the individual more so than the organisation.

The question posed by Kinman and Jones (2005) of what do employees mean when they say they are stressed as a consequence of work, is a good example of how qualitative research is particularly well suited to the study of work-place stress. Since stress itself is a phenomenon that is based upon people's perceptions and feelings, there is a clear need to access these. Qualitative methods offer a means of making senses of people's personal opinions and beliefs about stress.

A review of the research literature relating to work related stress reveals quantitative methods, namely questionnaire surveys as being the most commonly used approach to measurement and assessment of stress. The popularity of this method can be attributed to various factors, such as the ease of collecting data in applied settings and across a variety of professional groups. Furthermore questionnaire ratings allow the researcher to use a standardised instrument to collect data from large scale samples and structured findings make it possible to compare people's answers, usually expressed in statistical formats. Qualitative methods as a mode of investigating work-related stress are not used as frequently as quantitative methods due to their generally being more time consuming and difficult to analyse rigorously (Burman, 1996).

Dewe (1989) however, suggests that questionnaire measures of work related stress may misrepresent results by inaccurately attributing

importance to factors and ignoring others. Additionally, Burman (1996) argues that the aim of quantitative methods, such as questionnaires, is to simplify phenomena which can lead to the misrepresentation of the nature of the questions under investigation, whilst Bithell (2000) states that the use of research designs devised primarily to investigate clinical or experimental procedures are not always appropriate for research that involves human interaction.

Johnson & Waterfield (2004) write that there still exists a sense of distrust of qualitative research related to its alleged ineffectiveness in producing useful and valid findings. They go on to write that the distrust may however, stem from more of a lack of understanding of the theoretical background for qualitative research. For example, an individual's beliefs in relation to stress will potentially affect their perceptions and subsequent work-related behaviours. These are argued to be variable and context specific (Dewe et al, 2001) and for this reason qualitative research unlike quantitative research is underpinned by the belief that there is no one universal reality, thus consensus is neither achievable or the most favourable outcome (Johnson & Waterfield, 2004).

To understand the multiple-dimensional complexities of human behaviour, research must be able to go beyond the limited scope of quantitative data and experimental models (Hammell & Carpenter, 2000) and explore lay representations and individual explanatory models of events such as work-related stress. Interviews in particular, can give a greater depth of understanding to the intensity, frequency and meaning individuals attribute to stressful experiences (Dewe, 1989).

According to Burman (1996) there are several salient reasons for conducting interviews, namely that they are concerned with subjective meaning rather than eliciting standard format responses for comparison with other groups or individuals and secondly that interviews can "enable exploration of issues that maybe too complex to investigate

through quantitative means" (p. 50). Matterson and Ivanevich (1987) state that stress is a matter of perception in view of the fact that nothing is stressful unless the individual defines it as being so. Moreover, Lazarus (1966) contends that no objective measure is enough to establish a particular event as stressful as only the individual can do this. Therefore conducting interviews are advantageous in exploring in-depth the experience and potential impact of work-related stress.

An extensive literature has been published about the environment in which health professionals work and the impact of the psychosocial work environment on the individual's well-being. (i.e. McGown 2001; Stowder et al, 2001; Shader et al, 2001; Bratt et al 2000; Healy & Mckay 2000; Schmitz et al 2000; Kirkaldy & Martin, 2000; Demerouni, 2000; Tyler & Cushway, 1992). However, in the fields of physiotherapy and occupational therapy, studies into the environment have been conducted primarily to evaluate the impact of the therapeutic environment on the provision of care to patients. In comparison the research conducted on the impact of the working environment on therapists' well-being is minimal and this limits the application of research findings based on other health professions to therapists Sutherland and Cooper (1993) propose the reason for this comparative lack of research is the assumption that health care professionals are good at coping and have high expectations of their abilities to help others.

This assumption is quite likely inaccurate in light of the numerous studies that have established that health and social welfare occupational groups have statistically significantly higher rates of work-related stress and illness than all other occupations (HSE: SWI 2008/09; 2007/08; 2006/07; 2005/06[19]). Furthermore despite the well defined selection criterion and subsequent training of health care professionals', considerable variation has been found in how these

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[19] Published reports for SWI surveys from 1995 onwards can be accessed via: http://www.hse.gov.uk/statistics/publications/swi.htm

individuals respond to stress (Keinman & Melamed, 1987) thereby rendering as irrelevant the assumptions and generalisations about occupation specific coping (Keinman & Melamed, 1987).

This study therefore, aims to using in-depth interviewing to examine therapists' representations of their psychosocial working environments and the nature of work-related stress within this context. Moreover, this study will make possible the investigation of meaning applied by therapists to the experience of work-related stress, thereby adding qualitative depth to the overall research objective, to describe and understand the psychosocial environment and nature of work-related stress of NHS therapists. This present research is exploratory and therefore concern was discovery and description rather than the testing of clear hypotheses and the development of causal relationships

3.2   Literature Review: Qualitative Research

The following section reviews literature published over the last decade (1996 to 2007) relating to work-related stress and NHS physiotherapists and occupational therapists.

Databases searched included: Web of Science, Social Sciences Citation Index, Medline, PsycARTICLES, PsychINFO, CINAHL, AMED, PubMed, and ASSIA. Search terms for this study included physiotherapists, occupational therapists, Professions Allied to Medicine (PAMS), stress, stressors, work-stress and occupational stress, health, coping, National Health Service (NHS), qualitative, and interviews searched as 'and' / 'or'. The database searches involved setting limiters to include the following: publications between 1996 and 2007, human respondents, English language and searching by all text and key words. Manual searches of reference lists of relevant articles were also conducted. Only studies which qualitatively analysed data and presented findings with respondents employed as qualified therapists' by the NHS were selected. Hence, studies using quantitative

methodologies or samples that were not employed by the NHS were excluded. Articles obtained were then searched for further relevant studies.

The 1996 cut off date was used to ensure that the most recent literature was reviewed. The search was limited to NHS employees to ensure relevance to the context and aim of this study.

Only one qualitative study designed specifically to develop understanding of issues relating to stress as experienced by therapists was located as an outcome of an extensive search of the UK research literature. This study was conducted by Brook and Williams (1996) using semi-structured interviews, to investigate issues of occupational stress in ten neurological rehabilitation physiotherapists of mixed grade. The authors found that all ten therapists reported experiencing high levels of work-related stress. Sources of stress, irrespective of grade, were found to be similar and included: clinical overload; administrative responsibilities; autocratic management style; and rapid work-place change. The authors explain the similarity of stressors amongst grades as due to the similarities in clinical roles. Work overload was attributed to a variety of factors including understaffing, large clinical caseloads and administrative duties. Additionally, Brook and Williams note that these multiple demands resulted in role conflict. The stressors of high workload and role conflict were found to be compounded by unrealistic standards set by physiotherapists for themselves. Of the few differences in stressors amongst grades, lack of confidence was found to be problematic for junior grades, whilst superintendents reported that managerial responsibilities were particularly stressful.

Brook and Williams (1996) found that the experience of work-related stress was perceived by all respondents to have negatively impacted on their personal wellbeing. A range of both physical and psychological outcomes were reported including: back & neck pain; headaches;

anxiety; and frustration. Stress was also perceived to have negatively impacted upon professional performance. Feelings of guilt were found to accompany the experience of work-related stress, which was itself perceived to be a personal failing that ought to be managed at the individual level. The use of work-related counselling services was not positively embraced by the respondents as a viable solution to work-related stress. Finally, stress experienced as a consequence of work was reported to negatively impact upon respondents' home-life, with therapists expressing difficulties in leaving their problems at work and consequently venting their frustrations on family members.

Johnson and Waterfield (2004) state that a researcher cannot divorce themselves from the qualitative research process; in acknowledgement of this sentiment, Brook and Williams (1996) disclose that their primary researcher was also a qualified physiotherapist and as such was informing the research process with subjective value judgements due to the researcher's professional experiences. Sim and Wright (2000) write that "the inevitability of subjectivity is a resource rather than a source of error or bias" (p: 134); so the dual role of the primary researcher in Brook and Williams (1996) study would not be a problem if in order to enable the reader to understand how and why choices about the analysis were made, clear explanations had been given about the reasons for analytic decisions.

Brook and Williams (1996) do in fact briefly mention the value of reflexivity to the research process but then fail to explain how and at what stages of the analysis, interpretations of the data may have been informed by the duality of the researcher's role. Johnson and Waterfield (2004) write that it is not imperative for the reader to agree with interpretations, but they should be enabled to follow how the process by which the researcher made the decisions. As such, a discussion as to the impact of the researcher on Brook and Williams (1996) research would have been appropriate in a section written to introduce and explore limitations and strengths of the study.

A second methodological issue arises from the duality of the researcher's role in Brook and Williams (1996) study. The authors write that in order to establish rigour of analysis they conducted a search for contradictory evidence in the data in order to broaden themes and transform meaning. This procedure is a recognised and valuable method of establishing rigour however, Brook and Williams refer only to one researcher, so it is difficult therefore, for the reader to judge whether single researcher interpretation and analysis is based on the researcher's emotional reactions or if in fact, the researcher has been able to recognise their role in shaping the data (Johnson and Waterfield, 2004). In relation to Brook and Williams (1996) study the reader's uncertainty as to the impact of the researcher emotional interpretation is heightened when the primary researcher's dual role is considered. Neutrality of the data would have been more clearly established if a recognised validation procedure such as multiple independent coding of the data or peer review of themes had been implemented.

Methodological problems withstanding, Brook and Williams' (1996) study into stress amongst neurological rehabilitation physiotherapists suggests that many of the stressors which affect nurses and other NHS health professionals are also shared by therapists and this can leave them vulnerable to the experience of work-related stress such as high workloads and responsibility for others.

Additional quantitative research suggests that there are a number of factors that are unique to the therapy professions that may in addition contribute to their experience of work-related stress. For example, the nature of their clients and the fact that physiotherapy and occupational therapy often necessitate intimate and prolonged contact between therapist and patient (Wolfe, 1981). Brice (2000) in response to such quantitative studies suggests that occupational therapists may experience their work as emotionally demanding (cited by Brice, 2000: Rees & Smith, 1991; Sweeny et al, 1993a; Brollier et al, 1986; Rogers &

Dobson, 1988; Sturgess & Poulson, 1983; Prenger & Brown, 1992), and conducted a qualitative study to investigate the emotional demands experienced by OT's working with adults who have enduring mental illness, and the coping strategies they employ.

The study was conducted through the use of semi-structured interviews with six senior I grade OT's working within the field of mental illness. The author explains the use of senior I grade OT's by saying that in her opinion clinicians of this grade would have sufficient experience upon which to draw to enable the findings to address the research aims. The data were analysed using the framework method which involves developing a thematic framework to identify key issues and recurrent themes in the data (Ritchie & Spencer, 1994). Brice (2000) found that OT's experienced working with adults with enduring mental illness to be, from time to time, emotionally demanding. These emotional demands were found to be: over involvement with the client group; clients' problematic and complex needs and behaviours; lack of client motivation for independence; and long periods of time working with the client group. It further emerged that perceived difficulties with organisational procedures and teamwork exacerbated OT's feelings of emotional stress.

With regard to the coping strategies employed, the study showed that respondents reported using wide range of coping strategies and that emotion-focused and problem-focused, with supervision and talking with colleagues' strategies to be the more effective. Despite the potential for high levels of emotional demand, Brice (2000) found that all of the OT's interviewed had willingly worked within the field of mental illness for significant periods of time, and that all respondents reported that they experienced their jobs as rewarding and satisfying.

In order to establish validation and dependability of the data Brice (2000) utilised respondent validation, which she achieved by asking respondents to review draft summaries of their interviews. Although not

addressed by Brice, respondent validation is regarded by some researchers to be a questionable procedure (Krefting 1991; Horsburgh, 2003). This being due to the possibility of respondents changing their mind over the passage of time about the issues discussed during the interviews or respondents experiencing poor recall. These problems are credited as having the potential to cause confusion rather than confirmation of data (Bloor, 1997; Angen, 2000; Long & Johnson, 2000). Johnson & Waterfield (2004) argue that respondent validation can lead to researchers having to make decisions about modification and retraction of data that are informed more by moral judgement than analytic decisions.

Respondent validation is however, an accepted method employed in qualitative research to enhance dependability and credibility of the data (Johnson & Waterfield, 2004). It is good practice however, to include respondent responses to the review of data in the research findings of a study (Krefling, 1991). Brice (2000) although mentioning modifying the data before analysis was undertaken as a result of respondent validation, does not discuss or detail the modifications at this point or at any point later in the paper.

As with most small scale qualitative studies, the findings from the Brice (2000) study cannot simply be generalised to all occupational therapists. However; the study does lend support to the proposition that prolonged contact between therapists and clients increases the likelihood of emotional demand (Wolfe, 1981; Maslach & Jackson, 1982). The study furthermore, demonstrates that within the field of enduring mental heath at least, the profession of occupational therapy has the potential to expose the OT to the experience of emotional demand, and that such demand may be a causative factor in the OT's experience of work-related stress. On the other hand, the Brice (2000) study also reveals that again within the field of mental health at least and despite the possibility of emotional stress, the profession of

occupational therapy can be experienced as a satisfying and rewarding job.

Park et al (2003) conducted a qualitative study with the aim of identifying key factors that determine the attractiveness of physiotherapy as a career choice and the NHS as an employer. Interviews (n=92) were conducted with: school pupils; mature students; physiotherapy students; physiotherapy assistants; agency physiotherapists; and independent sector physiotherapists. They found that high levels of stress and workload, staff shortages and poor equipment undermine the attractiveness of physiotherapy. Conversely, they found that physiotherapy as a career choice is attractive because of the opportunity to care for patients, job availability, variety in work content and high levels of teamwork. Unfortunately, Park et al (2003) did not interview physiotherapists employed within the NHS. However, with a similar research question in mind, Rugg (1999) conducted a mixed method study, using questionnaires and semi-structured interviews, to investigate the influence of various personal and environmental factors on British occupational therapists continuity of employment.

The qualitative phase of the Rugg (1999) study consisted of 39 interviews with qualified OT's: 14 of whom had either withdrawn from or failed to enter occupational therapy practice within one year of qualifying. The remaining respondents were composed of a random sample of respondents from a preceding quantitative phase of the study, all of whom had remained in practice. The findings linked retention in practice to: the quality and quantity of social support from co-workers; access to continued professional development (CPD), which was often perceived to be gained through interaction with seniors; and opportunity to help clients. Rugg (1999) further found that the absence of these retention factors negatively influenced participants' decisions to continue their employment. Therefore, directly linked to staff turnover was the absence of good social support from

colleagues and supervisors; the absence of CPD opportunities; reduced levels of professional autonomy; lack of professional respect from other health professionals, and excessive levels of responsibility amongst newly qualified OT's.

Rugg (1999) conducted a thematic analysis of the data (informed by Miles & Huberman, 1994) and presents good examples of data which clearly fit the thematic categories. Unfortunately however, the reasoning process by which the analysis was conducted is not clearly described. Although the data presented appears to capture the meaning the author puts forward in her narrative, no information is provided about prevalence of themes such as, was any one theme more dominant than the others? However; Rugg re-establishes the reader's confidence as to the validity of the findings by stating that reliability of the final themes was pursued via the conduct of multiple independent coding.

Several further limitations of the study were raised by Rugg (1999), these being that respondents were small in number and not randomly selected, which limits the generalisability of the findings. The author further raises the issue of role contamination in that the primary researcher held the dual role of researcher and academic whose responsibility included the academic assessment of respondents. However; Rugg states that all efforts were taken to minimise the potential contamination such as, recruiting for the study only once the researchers responsibility for the respondents work was finalised.

It is clear from this review of the literature that the volume of qualitative research examining stress amongst physiotherapists and occupational therapist is extremely low and for that reason, it is not possible to extrapolate sufficient data from the reviewed studies to make convincing statements about the nature of work-related stress as experienced by therapists. So, in order to broaden understand of how the NHS hospital as a work-environment may impact upon the experiences of work related stress, it is appropriate to narratively review

qualitative work (1996 to 2007) of other health professionals within the NHS.

Murphy (2004) conducted a qualitative study to explore the perception of stress of nephrology nurses within a nephrology center in Northern Ireland. The information was collated from a sample of 10 nurses through semi- structured interviews. The interview transcripts were analysed using the constant comparative method of the grounded theory approach. The study demonstrated that the issue of stress was prevalent within this small group of nurses both at work and at home. Stress was found to derive from the following categories: job content, resource issues, professional concerns, professional working relationships, and extrinsic factors. The author made some interesting findings, the most pertinent being that the conditions for stress for the group of nurses studied, appear to be like any other group of individuals. For example, it was found that the task-oriented work within the nephrology center may have lead to both lack of autonomy and lack of job control, which Murphy suggests, may be linked to poor staff morale and job dissatisfaction amongst the nurses.

Links and Daniels (1999) addressed workplace health concerns of employees at an acute hospital trust. The research conducted utilised a focus group methodology to investigate health concerns of multidisciplinary groups of health care workers (n=27). Their findings indicate that the concern for the majority was workplace stress. Stressors that were identified as important to the groups were, for example, the nature of the work they were undertaking, staffing level, and volume of the work, management styles and their work environments.

As with Murphy (2004) previous research has suggested that lack of job control and lack of autonomy, has a direct effect on job stress. In fact, the conditions for stress most frequently studied and cited in the literature can be grouped under three general headings: (i) task

characteristics (workload, role conflict and ambiguity, and autonomy), (ii) organisational characteristics (job context, and organisational pace and technology) and (iii) personal characteristics (demographics, social support, hardiness, unrealistic expectations, and career progress). It would appear that Murphy's (2004) and Links and Daniels's (1999) findings lend support to the suggestion that the experience of these conditions render the individual more vulnerable to stress.

The environment one works in can have a powerful influence on an individual, and it has long been recognised that many aspects of nursing work can result in high levels of stress, with negative consequences for the individual nurse and patient care. Difficulties in coping with nursing work can further result in stress. With this in mind Mackintosh (2007) conducted a study designed to explore and describe how qualified nurses working within, in-patient surgical areas cope with the daily experiences they are exposed to. A descriptive qualitative approach was taken using a purposive, theoretically congruent sample of 16 qualified registered nurses. The interview transcripts were analysed using the four stages outlined by Morse and Field (1996). Three key themes emerged from analysis; relationships with patients, being a person and the effect of experience. Mackintosh found that the three themes connected to describe a process whereby the individual switches off from the environment around them by adopting a working persona which is different but related to their own personal persona and is beneficially enhanced as a consequence of experience. Mackintosh concludes that working as a nurse, results in exposure to potentially distressing and stressful events from which it is important to protect the self.

In a study of palliative, psychiatric and general care nursing (McNeely, 1996) 308 nurses completed questionnaires on sources of stress and coping strategies. Nurses were asked to rate listed items as "not stressful", "occasionally stressful", "somewhat stressful", "quite stressful" or "extremely stressful" and invited to list any other source of

stress that did not appear on the list. Of relevance to this narrative review (and this study) is the fact that additional qualitative data were also gathered by interviews and diary notations from a smaller sample of those nurses. The author cites the information gathered during interviews as being especially helpful in clarifying what nurses were saying. The inability to meet patients' needs emerged as being of great concern. In interview, nurses continually stated that doing the basic care is, for nurses, only part of the work. Nurses believed that the expectation of the patient is that holistic care should be available and the expectation of the nursing manager and the nurse is that they should be delivering holistic care. However, nurses stated that they are frequently unable to do so because of staff shortage, which reduces the nursing time available to the individual patient.

Consequently, nurses felt that they were letting their patients down, and, although they believe that they, as individuals, were doing their best, they felt guilt, anxiety and a loss of job satisfaction. Qualitative data additionally emphasised that changes in the system occurring at that time (1996) were creating great stress for nurses. Complaints about "lack of consultation", "change by imposition rather than by mutual consent", "managers who are unsupportive and who do not understand" were cited as being frequent.

The main coping strategy reported (McNeely, 1996) was the use of social support. Again the author states that the interviews and diaries were useful in providing examples of how social support was used. Although some respondents stated that their spouse or partner was very supportive, most nurses said that they preferred to confide in other nurses because they were better able to understand particularly in relation to the emotional component attached to their work.

The other two most frequently listed coping strategies were of the avoidance coping type such as thinking of other things and tension reduction techniques, such as exercise or shouting. Only ten of the 308

respondents reported using professional help to cope with work-related stress, and some of those interviewed stated that, although there was professional counselling available, they would not feel comfortable using it. The usual reason given was the fear of consequences for their career. This attitude was said to be more prevalent among psychiatric nurses who expressed the view that nurses in their area of work are sometimes not very good at dealing with their own and their colleagues' psychological needs. Further, they felt that there was too little recognition among senior staff and administration of the stress carried by staff and of the need to provide better ways to help nurses to cope with the stress. McNeely concludes, by recommending that if patients are to receive quality care, then the needs of nurses must also be taken into consideration.

Bruneau and Ellison (2004) conducted a mixed methods study, using the Nurses Stress Scale and Nurses Coping with Stress Questionnaire to investigate work-related stress in 18 nurses providing palliative care in a UK NHS community hospital. (These instruments were administered twice before and twice after a stress-reduction programme), alongside in-depth qualitative interviews (conducted before and after the programme) and a 12-item questionnaire used to assess whether the nurses found the programme useful. Bruneau and Ellison found no evidence of any general improvement in stress and coping scores following the stress-reduction programme. In fact the findings indicated that most nurses did not find their work particularly stressful, and most felt well-equipped to cope with palliative care stress. However, the interviews identified a small group of nurses who felt ill-equipped to cope and routinely found their work stressful. The principal sources of support for both groups of nurses were family and friends at home rather than colleagues at work, with most reporting that there was little opportunity to share experiences and feelings with their colleagues.

Summary

The studies reviewed above suggest that the psychosocial work environment is important for all NHS employees' health and wellbeing. Psychosocial work characteristics imply risk factors linked to the social and organisational environment of work that may be important in the causation of stress. Psychosocial work exposures included psychological, emotional and task demands and antecedents to stress across the occupational groups in the studies reviewed were similar and include: nature of work and job content, decision latitude, demands, rapid organisational change, professional working relationships and resource issues (Brook and Williams, 1996; Murphy, 2004; Links and Daniels 1999).

These studies suggest that the social context of work is important, and it influences work characteristics. Work characteristics are not independent of their social setting but, instead, are situated within an organisational setting that is itself embedded in a social context (i.e. Mackintosh, 2007; McNeely, 1996). Social support provides an important buffer against the negative effects of work-related stress and a variety of coping strategies are employed (McNeely, 1996; Rugg 1999; Brice, 2000).

Although the findings are enlightening and many similarities emerge, the picture painted by the studies reviewed is not cohesive and does not present an in-detail representation of the psychosocial working environment(s) of NHS employees. The studies do however; demonstrate the importance of the contribution the psychosocial work environment makes to the quality of work-life for NHS employees, and the need to generate the same level of knowledge that has been reported within the nursing profession to physiotherapists and occupational therapists. Despite the nursing profession having similar organisational and patient care components to therapists, the working environment, professional requirements and clinical experience are

different and this suggests that the findings from nursing are not directly attributable to therapists.

As mentioned previously, a major criticism of qualitative research on stress is that its aim in not to quantify the extent of stress or to make statistical generalisations. It is important however, that consideration be given by researchers of quantitative and qualitative traditions, to the degree to which insights from in-depth qualitative studies might be relevant to the wider populations of therapists. Furthermore, Cooper et al (2001) argue that the real issue is not whether individuals are experiencing too much stress, but rather how researchers understand the stress process and implications for stress management. From research undertaken thus far, too many studies in defining the causality of work-related stress fail to acknowledge the representations of work-related stress held by individuals. Kinman & Jones (2005) argue that insight into how individuals understand the concept of work-related stress is valuable, particularly as representations of stress held by individuals inform their attitudes and actions.

3.3 Research objective

The objective of the present study was to develop an in-depth understanding of therapists' representations of their psychosocial working environments and of issues relating to stress experienced as a consequence of work. Qualitative research was chosen as the most appropriate data collection procedure as it offers the potential to develop a deep understanding of how individuals experience and perceive their worlds (Bryman, 1988).

3.4 Research Question

This study addresses the following research question: How do therapists represent their psychosocial work environment and what

meaning do they apply to the experience of stress as a consequence of work?

3.5 Research Procedure – Pilot Study

The pilot was an important step in planning and preparation before embarking upon the in-depth interview study to be discussed in this chapter. Therefore the following sections will briefly summarise the design, procedure and outcomes of the pilot study, as well as describing the impact the pilot had on the design of the main study.

The aim of this pilot study was to conduct semi-structured interviews with a small (n=2) convenience sample of therapists from the professions of physiotherapy and occupational therapy to test the interview schedule and to identify any methodological related problems.

3.5.1 Pilot study - Research Design

Semi-structured 'in-depth' interviews are to be used in this study as an exploratory research tool, conducted for the purpose of exploring people's thoughts and feelings, whilst obtaining detailed information about categories of inquiry. Semi-structured were selected as the most useful way to elicit information, as the design of semi-structured interviews allows the researcher to define and follow their own topic of interest in order to meet the study aims and objectives, while at the same time facilitating the emergence of the interviewee's own perspectives and definitions of the issues (Cox, 1999).

3.5.2 Pilot study - Interview Guide

An in-depth review of the literature (as presented in the introductory chapters of this thesis) resulted in the classification of seven categories of enquiry relating to psychosocial factors at work, which are as follows:

- Demands at work
- Active and developmental work
- Interpersonal relations and leadership
- Job satisfaction
- Health
- Work-related Stress
- Coping

A draft interview guide composed of a series of questions was developed to elicit information about the therapists' experiences and meanings attached to each category. This interview guide was not designed to be treated as a rigid questionnaire rather, the aim for the interviewer was to ask all of the scheduled questions but with the option of varying the phrasing and sequencing of questions.

3.5.3 Pilot Study Procedure

Following approval from the Multi-site Research Ethical Committee (Nottingham Research Ethics Committee 2[20]) permission was sought from therapy managers to recruit from their members of staff. After which, a generalised invitation letter was extended to all therapists at their place of work within the relevant Hospital Trusts. Therapists were invited to contact the researcher for further information and upon receipt of such were asked to volunteer to participate in the interviews.

The pilot study, as stated, was concerned with testing the study design, therefore the first two therapists to volunteer (one from each professional group) were recruited to participate in the pilot phase of this interview study. Recruitment followed a process of full informed consent: interviewees were provided with assurances regarding the voluntary and confidential nature of the investigation. The interviews were consensually recorded and a research consent form was

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[20] REC reference number: 04/Q2404/102. Date of approval: 08/11/04

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completed by each participant prior to the interview. Both interviews were conducted at the therapist place of work in a room identified by the interviewee as available and suitable.

3.5.4 Pilot study Analysis

The narrative data were prepared for analysis by converting the raw data into partially processed data in the form of transcripts, which were then coded and subjected to thematic analysis.

The aim of the pilot study was to test the study design with potential interviewees and to identify any methodological related problems; therefore analysis was pursued by one researcher and was not tested for validity.

3.5.6 Pilot Study Outcome

It was planned that the final interview schedule would consist of open questions based on the categories of enquiry and finalized through the pilot work. The interviewees however, were keen to take some part in directing the interview. They had definite ideas about the information they wished to give, and they were encouraged to do so; although the interviewer attempted to insert follow-up questions as far as was possible, and furthermore attempted to return to the missing questions at a later stage when the respondent had said what he or she considers most relevant.

The outcome however, was not ideal. Attempts made by the interviewer to keep to a predetermined schedule of questions; even when the order of questions was changed to accommodate the flow of the interview, reduced both the respondents' willingness to talk well on those subjects which are of central importance, and the time available in which to do so (because of the interviewers need to insert questions in order to complete the full schedule).

Consequently, instead of a semi-structured interview format, the main study will employ in-depth qualitative research interviews. An in-depth interview is an open-ended, discovery-oriented method that is well suited for facilitating the respondents own perspectives and experiences of the categories of enquiry to emerge and for these to direct the flow and content of the interviews.

3.4 Main Study

3.4.1 Study design

In-depth, qualitative research interviews are to be employed in this study as an exploratory research tool. The goal of the interview is to deeply explore the respondent's point of view, feelings and perspectives relating to their psychosocial working environments and issues relating to stress experienced as a consequence of work.

3.4.2 Conducting an In-depth Interview

The interviews are to be face-to-face and conducted by the primary investigator and author of this thesis (Faye Griffith-Noble). To facilitate ease of attendance, all interviews will be conducted in a private room within the hospital building(s), but away from the interviewee's actual department of work.

The in-depth interviews required preparation which involved several stages, and were as follows:

1. Thematising

This was the first stage of the process whereby the purpose of the interviews was clarified. The general purpose of the interviews was to develop an in-depth understanding of therapists' representations of their psychosocial working environment and issues relating to stress

experienced as a consequence of work. Therefore it was during this first stage that the key information needed to be gathered through the in-depth interview process was pinpointed.

This stage involved close examination of current literature and findings from research studies (in both generic work environments and the NHS sector) on psychosocial working environments and work-related stress, as well as the findings from the previous study presented in this thesis The conclusion reached after this process was that there is no single cause of stress; the causes are many and common. Additionally, if not controlled, work-related stress can cause numerous mental and physical health problems. There was however, a sufficient level of consensus within the literature and body of research, and importantly the previous research study, to provide guidance about what key information needed to be gathered through the in-depth interview process.

Several a priori categories of enquiry emerged and are as follows:

- Demands at work
- Interpersonal relations and leadership
- Work-individual interface
- Health
- Work-related Stress
- Coping

No interview questions were formulated, although the interviewer was ready to pay close attention to discussions concerning these topics. Furthermore, respondents were not informed of these categories of enquiry; they were simply asked at the outset to talk about their working environment and experiences of stress at work. As the interview progressed and the respondent talked about things that were of relevance to these categories, they were encouraged to express opinions, experiences, and suggestions. It must be noted also that

despite the a priori categories of interest, respondents were allowed to lead the interview in new directions as long as they were relevant to the research in general.

2. Designing

After the purpose of the interviews was clarified, the way in which the information was to be found out was planned.

A key part of this process was deciding that an interview schedule was not to be used. Instead thematic categories of interest (as per above) were decided upon. As stated before, the aim was (if the discussion during the interview warranted it) to allow transition or change of direction during the interview. The thematic categories therefore, were developed to simply help the interviewer stay on track; help insure that important issues/topics were addressed; and help maintain some consistency across interviews with different respondents.

3. Interviewing

The actual interview consisted three main parts. The first consisted of the researcher introducing themselves and the study and asking a few short closed questions designed to gain factual demographic information about the respondent and importantly to comfortably start the process of interaction (i.e. age, qualifications etc). The second consisted of the 'interview' whereby the respondent was invited to talk about their experiences, perceptions etc. The main responsibility of the researcher during this part was to listen and guide the respondent through a conversation until all of the important issues on the interview guide were explored. The third part of the interview consisted of a series of 'ending' questions to prompt the respondent to add information that they felt may have been missed during the interview.

The following describes a sequential series of events that illustration the interview process employed in this study:

1. The interviewer and respondent introduce themselves; the interviewer proceeds to explain the interview process e.g., welcome; overview and topic; ground rules i.e. confidentiality; questions from interviewee about interview conduct etc.

2. The interview begins by the interviewer asking a series of short closed questions designed to elicit factual information about the participant without compromising their anonymity e.g. job title; how long in position etc.

3. The respondent was then invited to talk freely about their work environment and stress as related to work. Where appropriate, questions were posed to the respondent to elicit deeper information relating to their topic of discussion and also to probe for information relating to the categories of inquiry contained in the thematic guide. Phrasing of questions posed by the interviewer, were designed to encourage the respondent to speak freely. When necessary question were followed by a series of prompts and probes to encourage interviewees to expand, clarify, or explain what they were saying, such as "would you explain that further?" or "would you give me an example?".

4. To conclude the interview, ending questions were used to prompt the interviewee to add information that they felt may have been missed during the interview. Finally, the interviewee was thanked and the interview brought to a close.

4. Transcribing

This step involved creating a written text of the interviews. Thus, each question and response (verbatim) from the interview (using the recorded audiotape) was typed by a trained transcriber employed by the University of Nottingham.

5. Analysing

This important step involved determining the meaning in the information gathered in relation to the purpose of the study. The narrative data was read and themes, commonalities, and patterns were sought, to try to make sense of the information. The following section explains in detail how the analysis was undertaken.

3.4.3 Data analysis

The method of analysis was constant comparison. This is an iterative (repetitive) method of content analysis where each category is searched for in the entire data set and all instances are compared until no new categories can be identified.

Using this method all newly gathered data were continually compared with previously collected data and its coding in order to refine the development of theoretical categories.

The codes were given meaningful names that gave an indication of the idea or concept that underpins the theme or category. All parts of the data that related to a code topic were coded with the appropriate label. This process of coding involved close reading of the text. Whenever a theme was identified from the data that did not quite fit the codes already existing then a new code was created.

As the data were read through the number of codes evolved as more topics or themes became apparent.

Approach to coding:

The coding was started with themes identified from *a priori* categories of enquiry (introduced previously) and new codes emerged as the data were read through.

What was coded?

Types of described phenomena that were coded included the following examples:

1. Behaviours – specific acts such as, seeking reassurance from supervisors.
2. Events - things respondents have done that were often told as a story.
3. Activities - these were generally of a longer duration and involved other people within a particular setting, such as attending in-service training.
4. Strategies, practice or tactics – such as, staying late at work to get work done.
5. States – this refers to for example, general conditions experienced by respondents or found in their department or the NHS as an organisation.
6. Meanings – This was exampled by a wide range of phenomena. Meanings and interpretations included important information about what directs respondents' actions.
7. Concepts – information about how respondents understand their world, such as norms, values, and rules guide their actions. And, what meaning or significance it has for respondents, how do they construe events what are the feelings.
8. Participation – such as, 'having to' stay late at work.
9. Relationships or interaction with co-workers or other staff.
10. Conditions within the workplace or constraints.
11. Consequences – such as, positive coping reduces stress.
12. Settings – the entire context (therapy departments and NHS) of the psychosocial phenomena under study.

Analytic procedure

The following procedure was used for the analysis of the textual qualitative data:

1. Preparation of audio recordings into textual data

The audio-taped interviews were transcribed verbatim into raw data files (word documents).

2. Creation of categories

After transcribing the interviews, the analysis process started with the selection of one transcript. After close reading, the interview data were broken down into data bits. At this point, the raw data bits had no particular pattern or sense of connection. In order to discover the relationship between the various data bits, the researcher's organised the data bits into tentative categories according to their similar qualities. After creating numerous categories, these were then reviewed. The researchers then created some preliminary rules of inclusion for each.

The analytic process continued with close reading of remaining nine transcripts. The same process of category assignment was repeated with each. After all nine transcripts were broken down into data bits and placed in categories based on the preliminary rules of inclusion. At this stage, if there were data bits that were not placed in assigned categories they were placed into an a category labelled as miscellaneous

After careful scrutiny of data bits in each category, a tentative revised list of all categories was created. In doing so, it was discovered that one overarching theme had emerged from the data that was extraneous to the a prior themes. Also at this stage, by combining some of the tentative categories that looked and felt alike, sub-categories were created and the rules of inclusion were revised.

4. Continuing revision and refinement of category system

Category refinement remained an ongoing process throughout the data analysis. When examining the relationship between categories, it was found that certain categories could be combined with others, while some needed to be sub-divided even further. At this point, the "miscellaneous" category was examined and it was realised that many of these data bits now seemed to fit into some of the previously established categories. As the refinements became more focused, it was found that some of the data bits did not fit a category's rule of inclusion. Sometimes the rule of inclusion needed to be reviewed and modified. When this was done, category's data bits were examined to insure that they still fit. Finally, every data bit was carefully examined to ascertain its fit with the assigned category's rule of inclusion.

After reading and re-reading the interview transcripts and refining the categories, it was established that most of the emerging data related to one of seven overarching themes (see table 3.1). The categories, refined categories, and sub-categories informed the overarching theme. Appropriate quotes were then selected to communicate the overarching central themes.

5. Reliability

The process of analysis applied continually required the researchers[21] to check the consistency and accuracy of interpretations and especially the application of codes. This ensured both consistency and completeness in analysis. The coding of the same data by a primary coder and secondary and third coder was compared to see where there were areas of agreement and disagreement. Disagreements were then discussed and a new agreement was reached about a code's definition, improving consistency and rigour. In this case inter-rater reliability helped to refine the coding definition to one which the team agree on.

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6. Robustness and dependability of the data

In order to establish that the final themes are comprehensive and inclusive, two independent researchers familiar with the qualitative research procedure were asked to peer review the findings. Minor differences in opinion regarding the labelling of themes were resolved through discussion.

3.4.4 Recruitment of respondents

Respondents were qualified NHS employed therapists who consented to be interviewed at the point of recruitment to a preceding quantitative questionnaire study (Chapter 2). All therapists recruited to the quantitative questionnaire study were invited to participate in this qualitative study.

The inclusion criteria of the preceding quantitative questionnaire study were as follows:

1. Professionally qualified as a Physiotherapist or Occupational Therapist
2. Employed by one of the participating NHS Trust's:

Respondents within this qualitative study therefore, also matched the above inclusion criteria.

The aim of qualitative research is to continue to collect data until a point of data saturation is reached (the criterion by which sample sizes are determined in qualitative inquiry e.g., Morse 1995; Sandelowski 1995; Bluff 1997; Byrne 2001; Fossey et al. 2002). For most research studies, however; in which the aim is to understand common perceptions and experiences among a group of relatively homogeneous individuals within a phenomenological framework, 6 to 12 interviews is normally accepted as being the point by which saturation is generally achieved (e.g. Guest et al, 2006; Creswell, 1998; Morse, 1994; Kuzel, 1992).

Therefore, as this research was limited by resources and to only one interviewer, sample size was set at a maximum of 10 respondents.

It was desirable that the ten respondents chosen for this qualitative study were representative of the "typical" participant and as such able to answer the questions thoroughly and accurately, therefore an attempt was made to recruit therapists (equally from PT's and OT's) who represented the full range of professional grades (basic grade through to senior). Overall 28 therapists (from 179 survey participants. Chapter 2) consented to participate and from these, ten respondents were selected (according to dispersion of locality; profession; and professional grade) all of whom on invitation agreed to participate.

Recruitment Procedure

The recruitment procedure involved first seeking permission from department managers to recruit from their staff teams, after which, a non-personalised invitation (via letter at the time of recruitment for the preceding survey study), was extended to therapists at their place of work. Therapists were invited to contact the researcher for further information (via reply slip) and when in receipt of such to volunteer to participate in the interviews.

Recruitment followed a process of full informed consent. Every respondent was provided with a participant information sheet (PIS). The PIS included the assurance that the interview recordings and transcripts are to remain confidential and that findings from the study will be presented anonymously in all written formats and presentations. The PIS also informed potential interviewees that participation was voluntary and that withdrawal from the interview was permitted at any time. Respondents were encouraged to discuss the interview process with the interviewer prior to the interview to clarify queries about the process, to promote reciprocity and feedback. Each participant completed a research consent form prior to the interview.

The interviews took place during September 2005. All interviews were consensually audio-recorded.

3.4.5 Findings

Therapists' implicit and/or explicit values and beliefs (and/or attitudes), assumptions, and shared meanings are recounted through non-linear forms of thinking and expression. As such they are rarely expressed as complete and independent and almost always only corresponding to the subject matter being discussed at one point. In an attempt to place structure and context as well as to enable the whole of therapists' representation of their psychosocial working environment to be revealed, the researcher (in the following findings section) explores the interdependencies among these constructs in turn, within the seven broad categories and associated emergent themes, together with the words of the therapist used to communicate their experiences.

Sample characteristics

The present study used in-depth, qualitative research interviews with ten physiotherapists (n=5) and occupational therapists (n=5) from four UK NHS Trusts (Six NHS hospitals across the Trusts participated). Participating NHS trusts were chosen for their ease of access for the researcher, so were therefore located within the Midlands and North West England (as detailed in study 1).

To assure continued anonymity for respondents only the basic characteristics of the sample can be given:

The sample consisted of:

- 5 occupational therapists: 1 basic grade; 2 senior I grade; and 2 senior II grade.

- 5 physiotherapists: 2 senior I grade; 1 senior II grade; 2 senior III grade.
- All respondents were female.
- Age range: 28 years to 47 years (mean: 38 years)
- Time in profession: 6 months to 6 years (mean: 4 years)
- Time in job: 1 year to 24 years (mean: 12 years)

Themes and subcategories

Analysis of the textual data resulted in the creation of seven categories and 19 subcategories, which in the researchers view capture the key aspects of the themes in the raw data together with being assessed as the most important given this study's research objectives. Table 3.1 below, shows a synopsis of themes and subcategories.

Table 3.1: synopsis of themes and subcategories.

Theme 1: Representations of stress	
Subcategories:	What is work-related stress?
	To what degree to therapists believe they are stressed?
	What is the perceived impact of work-related stress?
	Stress reduction
Theme 2: Organisational Role	
Subcategories:	Work Demands
	Emotional demand
	Positive regard for clinical role
Theme 3: Organisational Internal Environment	
Subcategories:	Lack of effective employee consultation
	Agenda for change
	Ambiguous working environments
	Target driven environments

	Inadequate Resources
	Environmental conditions
	Training and professional development
Theme 4: Relationships at Work	
Subcategories:	Co-worker support and teamwork
	Inter-professional relationships
	Intra-professional relationships
	Supervision / line management
Theme 5: Job Satisfaction	
Subcategories:	Intention to leave
Theme 6: Home – work Interface	
Theme 7: Coping	

Theme 1: Representations of stress

How therapists understand work-related stress is important, such lay representations of stress as a consequence of work provide a framework for understanding what therapists are making reference to when they perceive themselves to be experiencing work-related stress.

What is work-related stress?

Respondents gave descriptions in terms that imply a stimulus-response imbalance between the demands of work and the resources of the individual, for example:

> "I think it's when you've got so many things piled up and you can't do them all, and you feel just snowed under and you just try to keep your head above water, and you're not actually moving anywhere"

"Work-related stress is not having enough time to do your job: you've got patients piling up and phone calls to make and letters to write without the time to do it."

Stimulus-response based definitions define stress to be a "stimulus characteristic of an individual's environment" (Cox et al, 2000, p: 32). The rationale of these definitions is that external forces (referred to as stressors) place demands on an individual in disruptive ways. When the individual's tolerance level is exceeded and a breakdown of coping behaviours occurs; the individual then becomes stressed (Cox et al, 2000; Cooper et al, 2001).

There are various criticisms of the stimulus-response definitions; the most prevalent being that they are too simplistic. Cox et al (2000) describe these definitions are conceptually dated (p: 4), referring to the fact that the approach does not incorporate the role of individual psychological differences and the perceptual and cognitive processes that are now widely acknowledged to intervene between stimulus and response (Cox et al 2000; Cooper et al, 2001). It is argued that in their simplicity the stimulus-response approaches reduce the individual's role to that of a passive recipient whilst, ignoring the dynamic interaction between the individual and their environment (Cooper et al, 2001; Cox et al, 2000).

As the interviews progressed and respondents give further details about their experiences and thinking however, it became clear that their conceptualisations of stress were far more sophisticated and complex. They acknowledge that stress does not reside solely in the individual or in the environment but in the interactions between the two, giving emphasis to the proactive role of the individual in the stress process. So, although respondents gave simplistic stimulus-response definitions of stress, when they talked in-depth, it became clear that they conceptualise stress as a dynamic interaction between the individual and their environment.

To what degree to therapists believe they are stressed?

For the most, therapists perceived themselves to be, at the time of the interview experiencing work-related stress. They further believed that stress was a long term situation and did not expect their exposure to work-place stressors to reduce anytime soon, as declared by this therapist: "I am very stressed. I am; I know I am... I would say the stress will remain quite constant".

Conversely one respondent when asked about her level of stress reported that "at the moment it's alright...I feel fine, but I've gone through periods where I've felt very stressed working here. But at the moment I'm fine", whilst another when asked if she was experiencing work-related stress said: "I have done in the past, but not so much now. But then now I think I cope with it better".

Stress was regarded by therapists as an unavoidable consequence of their work environment, and not something they experience in isolation; with over half of the interviewees being aware of colleagues who were also experiencing high levels of stress as a consequence of work, comments made included: "I think everybody's as stressed as everybody else" and "These people are experienced in the same stress as I am". Furthermore, therapists were mindful of the prevalence of stress as having a negative impact on co-workers individual well-being, for instance: "People are feeling really, really low at the moment" and group cohesion "It's just a squabble because everyone is under the same pressure, they've all got their own workload and then you find that you've been asked to go and do, you know, cover jobs or whatever."

Not only do the qualitative studies reviewed earlier in this chapter indicate that respondents from the professions of physiotherapy (Brook and Williams, 1996), occupational therapy (Brice, 2000) and nursing (Mackintosh, 2007; McNeely, 1996) experience work-related stress or are exposed to factors that may cause stress, but over 20 contemporaneous reports conducted within the UK have shown that

between one-quarter and one-half of National Health Service (NHS) staff report significant personal distress due to work (Weinberg & Creed 2000). There exists a substantial body of evidence to suggest that high levels of stress are endemic throughout the NHS (Anderson et al. 1996), and that many of these stressors may be unique to health care (Payne & Firth-Cozens 1987, Calboun & Calboun 1993). As such, the finding that respondents in this study perceive themselves to be stressed as a consequence of work is consistent. However it is important to note that the experience of stress as a consequence of work within the NHS is not a foregone conclusion as shown by the Bruneau and Ellison (2004) study which found that most nurses surveyed, bar a small group, did not find their work routinely stressful.

What is the perceived impact of work-related stress?

Workplace stress was experienced as a threat to therapists' wellbeing and the majority of therapists conceptualised stress as a negative phenomena. Conversely however, one therapist maintained that a certain degree of stress was a positive and potentially motivating experience, albeit one that would have negative consequences when the degree experienced exceeded a certain personal threshold:

> "I enjoy some stress, the drive it gives you, but I think when it goes up that little bit too much it starts affecting your mood and how you're feeling from the outside"

Therapists maintained that work-related stress affected them in a variety of ways. Two sub-categories emerged from the data and these were psychological outcomes and physical outcomes.

Anxiety, frustration and worry were notable recurrent themes, as therapists acknowledged the psychological impact of stress, for example one therapist admitted "I find everything very frustrating" and another said "I know people when they go off sick they put more stress

onto me and I don't like that and I worry...I wouldn't want my colleagues to feel like that about me".

Almost half of the therapists interviewed spoke of experiencing feelings of guilt centred around the impact that their absence would have on colleagues. With thinly spread staff and intensified workloads there was no 'slack' in the system so an absence by one staff member had a potentially big impact on the others. For example one therapist said about taking time off "It makes me feel quite guilty" whilst another said "I had a week off unexpectedly a couple of weeks ago and I really felt guilty about having the time off because I know there's a lot of work to do, obviously somebody's got to pick up the work and everything. It made me feel worried a bit that I am putting on everyone else"

Another emergent theme was emotional arousal, evidenced through feelings such as anger and unhappiness, as exampled by the following statements:

> "I get incredibly angry, fuming. I'd come here and I'd huff and puff but I know not to go mad, because it's not acceptable".

> "It was highly emotional, yes highly emotional ... I was actually bursting into tears talking about it, and I didn't realise how stressed I was really, until I was talking about it and actually bursting into tears, this is really stressing me out more than I realised really"

Sleeplessness was yet another psychological outcome spoken of by two therapists who said "Well, you wake up in the night thinking about work, and just worrying a lot" and "if you're stressed, sometimes you can't get to sleep because you're thinking about what you've got to do".

Perceptions of a causal link between work-related stress and minor ill-health were commonly expressed with work-related stress and stressors reportedly having brought about negative physical symptoms such as headaches and stomach and digestive problems, also mentioned were poor concentration, colds and muscle tension:

"I had to go because it was making me ill... but I've nearly always got colds, I've been getting migraine headaches, and never had migraine headaches before... I'm starting to get stomach problems now; my GP thinks I may have the beginnings of an ulcer. I've always get indigestion, and it got to the point where I thought, do you go to work to be ill all the time?"

"I feel my shoulders get tight, sort of heavy, I feel more flexed... My concentration isn't as good, I find and I kind of flit between doing bits of this bits of that bits of the other, I never kind of concentrate on one job and get that done and out of the way and do the next one, I do bits and pieces as I can really"

The finding of a perceived relationship between work-related stress and a number of physical and psychological health problems is similar to findings of other qualitative studies. One such study is the previously mentioned Brook and Williams (1996) study, which found physiotherapists were experiencing high levels of work-related stress, which was perceived as negatively impacting on their personal wellbeing. Also, Jinks and Daniels (1999) in their focus group study examining health concerns in the workplace for NHS healthcare workers, found stress to be perceived as a pervasive and negative influence on employees' health status.

This finding is also is in accordance with both, the findings of numerous quantitative studies that have established a relationship between health and work-stress amongst other professions, and of the widespread view amongst researchers that high levels of work-related stress are liable to result in ill-health (kinman & Jones, 2005; Blaxter, 1997; Pietre & Weinman, 1997; Clark, 2003).

Stress reduction

When asked what changes to the working environment might make their jobs less stressful, the most frequently mentioned aspects were a reduction in workload, increase in staffing levels and more access to resources and equipment as expressed by the following respondents:

> "In an ideal world, I think if I really had to say one thing it would be environment...just to be able to do the job that you try very hard to do. It is making it more stressful, more hard work to find ways to still do the job both with resources and equipment and space".

> "Reduced caseload, more people... If you had the time, more time, and less stress, then it would be a good job".

It is important to establish the stressful relationship between the employee and the work environment. Work-related environmental factors were found to be strong risk factors for stress and it would seem that respondents believe any reduction in stress will require interventions that deal with environmental causative work factors. In practice stress intervention strategies have tended to focus mainly on secondary and tertiary management techniques, namely minimising the impact of stress and identifying and treating its ill-effects respectively (Blaug et al, 2007). These interventions fail to take action to reduce the presence of stressors in the working environment. In consideration of the comments made by respondents solutions that ignore causative factors of work environment are likely to yield incomplete results.

Theme 2: Organisational Role

Organisational role comprises the activities and demands that are related to an individual's occupation (Cooper et al, 2001). Hence, this category is composed of emergent themes relating to the perception, activities and demands of being a therapist within the NHS.

Organisational role stress had been conceptualised as the difference between an individual's perception of what their organisational role should encompass and what is actually being accomplished (Lambert & Lambert, 2001). Work-related stress as a consequence of occupational role amongst health professionals, particularly nurses, has been established in a host of studies and is in fact a well researched area of psychosocial work environment research (i.e. McGowan 2001; Stowder et al, 2001; Shader et al, 2001; Bratt et al 2000; Healy & Mckay 2000; Schmitz et al 2000; Kirkaldy & Martin, 2000; Demerouti, 2000; Tyler & Cushway, 1992). However, due to the small number of therapy profession specific studies, little is known about how therapists perceive their organisational role and to what extent their role perceptions contribute to their experience of work-related stress.

It emerged that organisational role as a potential work-related stressor was a foremost theme within this study. Additionally it emerged that role stress for therapists was evidenced by ambiguity, conflict, and disparity arising from both characteristics of the individual and the work environment. Disparity between preconceived role expectations and perceptions of actual role experiences was a dimension of role perception referred to by therapists:

> "I think, in hindsight, if I look back at what I do now and what I thought I'd be doing about two years ago, I think the role is immense, personally and if I know then what I know now I don't think I would have said I would do it as a single person"

Similarly, therapists acknowledged experiencing conflict as a consequence of incompatible organisational role demands, specifically due to perceiving themselves as occupying two or more roles that have conflicting requirements or expectations, for example one therapist stated "Instead of being a therapist I'm being the discharge therapist": two roles that she clearly perceives to be conflicting as one role she believed had continuity of treatment as its focus whilst the other has termination of treatment.

A further emergent role perception manifested as confusion about work-related objectives and a lack of clarity regarding the expectations appropriate to their role, and even when role expectations were known a further uncertainty emerged about the methods for fulfilling role expectations:

"A lot of the time I didn't have a clue what I was doing. That was really stressful that"

"One of the things you do is to state what your objectives are. I have no idea"

Research that establishes organisational role as a potential work-related stressor is well documented although prior research specific to therapists is limited. These findings about therapists role stress add rich information to the limited body of knowledge of a perceived causal link between role perceptions and stress for therapists.

Conclusions about the causality between aspects of role stress and psychological and physical health outcomes are beyond the scope of this present study however, the suggestion of a negative relationship between perceptions of role and the experience of work-related stress can be made from the accounts given by therapists. This findings is supported by previous quantitative studies (conducted amongst non-therapy professions) that show stress arising from role ambiguity and

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role conflict is associated with job dissatisfaction, lack of self confidence, lowered self esteem and intention to leave and stress (Hughes, 2001; Sutherland and Cooper, 1988; Babin & Boles, 1996; Jamal, 1984; Sutherland & Cooper, 1988; Yousef, 1999).

Work Demands

Respondents perceived themselves to be facing quantitative overload in situations where the scope and / or quantity of work to be performed within a certain timeframe exceeds their capabilities:

> "There's just so much work load and we having to meet targets, so to meet that we have to do more hours... More hours in what we're contracted for and we have to work faster"

Furthermore, patient load was perceived to be a significant contributor to a sense of quantitative overload:

> "I am struggling with the amount of patients and I have now got a waiting list"

> "You do feel that you have to see as many people as you can see, simple for the fact, especially on the elective side, the turnaround is so fast that you just end up playing catch up all the time"

The perception of working multiple roles due to excessive workload was remarked upon by therapists with one stating: "I feel I'm doing three roles... my partner is saying, "well you were doing three jobs, were you not paid any more for doing those three jobs" and I say no ... and he says, "well you're the stupid one then, aren't you, for doing all those in the first place?""

Therapists also expressed a sense of quantitative overload as a consequence of too great a volume of work from conflicting aspects of their job such as administrative duties alongside clinical duties, for instance one therapist commented "We're getting bogged down with paperwork, there's form to fill in, single assessment forms, and it's just more and more paperwork"

Interestingly, therapists' deemed administrative duties to be supplementary tasks to that of clinical practice which was depicted as being what ought to be the sum total of their job. Moreover administrative tasks were described as being non-compatible with that of the clinical role due to being regarded as adding to an already existing clinical workload burden, as remarked upon by this therapist: "You see, from my point of view, my priorities are my patients, I need to see them, and the paperwork and management stuff comes secondary"

An emergent theme running through the interviews was therapists' belief in the existence of an organisational expectation that employees will undertake work commitments that exceed their contractual obligations i.e. "Its kind of expected isn't it you're not going to do 9 to 5 work, it's kind of expected, you will work above your level, that's what you get paid for". This obligatory workload burden was represented as stressful and unavoidable and as having a negative impact on job satisfaction. This opinion was characterised succinctly by one therapist who said: "No, no I am extremely unhappy with the amount of work I have"

Qualitative overload emerged as the expression of not having enough protected time to provide high quality care. Time, particularly the nature and restriction posed by appointments, is represented as a constraint within which work demands cannot be completed satisfactorily, the impact of which was felt by individuals in terms of contributing to excessive workload demands i.e. "Most of our typical day is meant to be

defined time, so I'm meant to have defined clinical times and defined managerial times but that never, never happens"

Emotional demand

As discussed previously in this thesis, emotional demand is a neglected area of psychosocial work-related stress research. However; research has shown that employees in jobs characterised as having high emotional demand i.e. health care professionals, have been found to experience higher levels of stress than other employees (Mann & Cowburn, 2005; Brice, 2000)). Also proposed in this thesis is the fact that therapists share a number of psychosocial characteristics with other health care professionals that leave them vulnerable to the experience of work-related stress; importantly responsibility for others and the associated emotional demand that this may necessitate is cited as an example of such a shared psychosocial workplace factor.

Surprisingly however, none of the respondents expressed the belief that emotional demand impacted upon their experience of work-related stress. In fact of the therapists who spoke about responsibility for patients, all perceived themselves as having an ability to distance themselves from the emotional component of such contact, encapsulated by the following: "I don't think I get particularly stressed about patients really. I am quite good at switching off without that so I don't think that particularly stresses me"

"Switching off" refers to an alteration in perception, manifest as a sense of emotional detachment. Rather than an inability to connect with others emotionally, "switching off" is a way of exerting control over emotional experience as a means of dealing with potential stress by preventing certain situations that trigger it; it is often described as "emotional numbing" or dissociation. It is a type of mental assertiveness that allows therapists to maintain their boundaries and psychic integrity when faced with the emotional demands of a patient or group of patients. Emotional detachment is a positive and deliberate mental attitude which avoids

engaging the emotions of others. This detachment does not mean avoiding the feeling of empathy, for example as one therapist stated "Some have got a lot of problems and you have to try and distance yourself, but be sympathetic and understanding"; it is actually more of an awareness of empathetic feelings that allows the therapist space needed to rationally choose whether or not to be overwhelmed or manipulated by such feelings. Mackintosh (2007) in his exploratory study of coping amongst inpatient surgical nurses, describes a similar process whereby in order to protect themselves from potentially distressing and stressful events, nurses switched off from the environment around them by adopting a working persona which is different but related to their own personal persona and is beneficially enhanced as a consequence of experience.

All of the respondents in this study clearly accepted that as therapists they had signed on to a professional role that accepts responsibility to meeting the needs of others for example: "My job's about quality of life for people and getting people to where they want to be; it's all about patient goals and patient directed rehab". Therapists' narrative indicates that they appear to care for their patients, to the extent that they provide help in the form of physical and occupational treatment and they appear to perceive that informed and skilful practice, not 'caring' about clients is what counts in their professional roles.

Positive regard for clinical role

According to several authors a major source of job satisfaction for therapists is their clinical role (Akroyd et al, 1994; Bordieri, 1988; Brollier, 1985; davis & Bordiere, 1988; Freda, 1992; Pringle 1996; Gladys et al, 2002). In accordance with this, respondents perceived their clinical roles to be the main contributing factor to their job satisfaction. Therapists spoke of intrinsic factors such as professional recognition, patient contact and therapeutic content as being the most satisfying and rewarding aspects of their jobs. Furthermore, the clinical role was perceived as the driving force of their work motivation and as

being the workplace source of self-esteem, which in turn fostered feelings of competence, particularly when therapeutic goals were attained:

"Seeing patients... it's great satisfaction because you do help them and do make a change, they're desperate by the time they get to see us. It's a hell of an ego boost to me because they think I am marvelous"

Another aspect of the clinical practitioner role perceived by therapists as contributing to their job satisfaction was professional autonomy, as clearly declared by one therapist "I'm an autonomous practitioner". Autonomy was described as the control over clinical decision making including the perceived freedom to plan treatment sessions and make independent decisions about the therapeutic process e.g. "I have total control... I do thrive on responsibility and make a lot of choices myself"

The opportunity to plan work and make decisions about how work should be completed has long been recognised as a significant factor in moderating or reducing work-related stress (Cox, 1990; Warr, 1992). Employee experiences of control and decision altitude are acknowledged as playing a central role in determining whether an employees experience of high demands in the workplace have a negative or positive impact and are considered fundamental in reducing the employees experience of work-place stress (Karasek, 1979).

Overall, the sense of satisfaction from providing effective clinical care and from experiencing intrinsic motivational factors such as recognition, patient contact and attaining therapeutic goals appear to have fostered a well developed sense of positive regard amongst therapists for their professional roles as embodied in the following statement "Well I know what I do is important, and I value what I do".

Theme 3: Organisational Internal Environment

Constructs that emerged to underpin the contextual themes representing therapists' organisational internal environment are "culture" and "climate". Although they are not identical constructs, both are concerned with psychosocial processes at the level of the group rather than the individual. Climate represents therapists' shared perceptions of organisational policies, practices and procedures that influence their motivation and behaviour. Organisational culture corresponds to therapists' implicit or explicit values, beliefs (and/or attitudes), assumptions, and shared meanings.

The constructs of "culture" and "climate" are not linear and are often described simultaneously; therefore therapists' organisational environment is presented, in the following section, according to the contextual themes within which representations of culture and climate emerge within.

Lack of effective employee consultation

Lack of effective employee consultation emerged as a dominant theme within this study, with therapists perceiving the organisational climate to be hierarchical and bureaucratic and one which permits little employee participation in decision making:

> "I think the decisions have been made and that's it... I think it just undermines the whole team really"

> "its like the Senior managers, they all seem to make decisions that affect our lives but they don't even consider what effect it's going to make"

Cooper et al (2001) write that autocratic and authoritarian leadership characterised by a lack of consideration of employee needs, attitudes and motivations is a potential source of workplace stress. This opinion holds particular relevance to the experiences of respondents in this

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study whose negative perceptions of their organisational climates; as a consequence of lack of employee consultation, are related in their descriptive accounts of dissatisfaction and direct feelings of stress:

> "It seems like stupid little decisions like that have a big impact on our, all our lives, because it just really, really irritates everybody... it's the fact that somebody has taken the trouble to set the rule, we wont give them any pens, well, what are we suppose to write with if its part of our job?"

> "Well, you now, knowledge is power isn't it, and if you haven't got knowledge then, you know, people are feeling really, really low at the moment, really stressed"

Perceptions of too little communication between management and therapists also emerged as having a negative impact on therapists' experiences of their organisational working environment:

> "We've been reporting back to the Trust for the last 3 years or so and they've blindly ignored it."

> "it makes you feel frustrated, the fact that if – especially from a management point of view – if they actually knew what it was that we actually did, then they might view us from a slightly different perspective"

Research has established that lack of participation in decision making processes, lack of effective consultation and poor organisational communication, are all potential sources of workplace stress (Michie & Williams, 2003, Cox et al 2000). It certainly holds true that respondents within this study perceive themselves to be disempowered and as a consequence dissatisfied, they also report feelings of mistrust toward

the organisation, all of which are perceived to be triggering and/or heightening feelings of stress.

Agenda for change

Agenda for Change (AfC) is the name given to the new national NHS pay, terms and conditions system. It is part of the NHS's wider modernisation agenda and seeks to improve the recruitment and retention of staff and facilitate the modernisation of services. Its aim was to introduce new pay bands and coordinated terms and conditions for NHS workers to ensure fair pay and a clearer system for career progression (NHS Employers: www.nhsemployers.org).

However, within this study it emerged that the structural changes implemented by means of the AfC may not have led to the improved outcomes expected by the NHS. Firstly, it emerged that therapists' experienced the AfC as being an overwhelmingly negative emotional process, as exampled by the following therapists who were talking about there own experience of the process:

"It was highly emotional, yes highly emotional, actually it was the only time I felt, you know, I was actually bursting into tears talking about it, and I didn't realise how stressed I was really, until I was talking about it and actually bursting into tears, this is really stressing me out more than I realised really"

"I would say I am quite happy, if it wasn't for this agenda for change"

Furthermore many therapists felt disillusioned and stressed by the AfC process and the way that it has been implemented, as noted by these two therapists:

"No I don't think the agenda for change was very efficient at all, I think things could have been done a lot better...if it had been left to us we could have been far more efficient"

"They're stressed about Agenda for Change and the outcome ...The system is easily corruptible because there is no consistency between the panels. There is no consistency between the hospitals"

Moreover, the sustained period of change representing the AfC is perceived as disruptive and intrusive and is believed to be undermining morale; all of which appear to be creating a culture of resistance to change. In addition, change is understood in terms of top-down plans and resistance is being reinforced by therapists' perception that pressure was put on them from the 'top' to implement the change e.g. "Enforcing change when it's being going fine before" instead of having a say in its nature or the direction, which moved the context of the change to a more personal level.

The AfC is promoted as providing employees with the opportunity to achieve fair pay and enhanced employment conditions (NHS Employers: www.nhsemployers.org). Despite such an assertion from the NHS, therapists spoke instead of perceived inequities within the AfC process and on the whole feeling undervalued as a result. Specifically, the prospect of reduced pay combined with the method of payment i.e. payment by results, exacerbated therapists' experience of stress and their perception of unfair treatment:

"People doing what were previously seen as a particular grade of job have gone to the agenda process and come out with a different band so now we've got people who were doing similar jobs on a higher band than another's so that's caused a problem"

"It's like now they're on about payment by results, you know, how do you pay an OT by results? How do you cost somebody's service? They want to know about the average input time of, say, a fractured neck of femur, how much OT input time and how much will that cost?"

Furthermore, therapists expressed dissatisfaction with both the outcome of the AfC, for instance one therapist said "Unfortunately, things like Agenda for Change, I thought that was going to be better than before and it's basically just the same", and a lack of trust as to the purpose of the AfC:

"Basically the Agenda for Change, the hidden message was getting people to perform, it was modernisation of the service and getting value for money, the Government want value for money, that's what it is, that's what it's all about money"

Alongside AfC the organisational environment and cultural climate of primary care was perceived to be changing rapidly however, none of the interviewees embraced or positively engaged with the plans for change:

"I think the last 6 months or so has just been, change, change, change, and I'm just waiting for things to settle down... It's the part of it the thing that keeps me going is the knowledge that things aren't going to be as they are, I don't think they are going to be the same in 3 years time, some things will have changed, it may have changed for the better, it may have changed for the worse, but things aren't going to be exactly the same, we are moving too fast for that to happen"

"It's very hard to think about some positive change"

Garside (2004) states that when a health system aspires to both quality and performance improvements over a sustained period of time there exists the potential for 'change fatigue', whereby employees become tired of new initiatives and of the ways they are being implemented. Within this study 'change fatigue' emerges as an established issue, characterised by scepticism and resistance to change. Reasons for such scepticism and resistance emerged as therapists' believing that the nature of the change was not made clear to them, and of exclusion from the change decision and implementation process, which have meant that the process and outcome have been open to a wide variety of interpretations.

Ambiguous working environments

Similar to the perception of uncertainty regarding existing organisational change, therapists also expressed uncertainty regarding further anticipated organisational change. Therapist also expressed uncertainty regarding the content and purpose of features of their jobs, particularly in relation to achieving and reporting performance:

> "We are filling in all these stats, nobody is actually sure why we fill it in, it is like a very complicated form that we fill in and actually why are we doing it? What is the information used for?"

Most therapists were uncomfortable with the perception of uncertainty, and further anticipated organisational change may have important and detrimental outcomes to both themselves (as individuals) and the organisation, such as a rise in stress, a decrease in satisfaction, a decline in organisational commitment and intention to leave an organisation.

Target driven environments

In the modern NHS the focus is now resolutely on performance outcomes, targets and a 'drive for results' (p.36: DoH 2004). Accordingly the NHS was perceived by respondents to be operating as a target driven culture. Rather than experiencing and embracing this 'target driven culture' as a process of empowerment and as an opportunity for enhancement of professional competency; as is promoted to be the outcome of 'effective clinical governance' (Moss, 2002), therapists instead spoke of feeling disempowered by a culture that they perceived has been enforced upon them without sufficient involvement from them in key decision making relating to the way in which targets are to be achieved. An outcome of which was confusion and suspicion as to what purpose the targets are to be put to use.

"I don't particularly know if it's the management of this particular Trust, or whether it's the way the NHS is going with the pressures of the government putting on them, but everybody has to reach targets and people who are asking us to meet these targets don't actually know what our job involves or entails and I find that quite sad because they haven't come and asked us what we do and what makes our job complete"

This is a finding that clearly contradicts the expected outcomes of government proposals (such as effective clinical governance) and as such is an important contribution to understanding the employees' experience of organisational change at a personal level.

Managing performance issues emerged as a difficult and potentially stress inducing workplace factor, particularly as the current emphasis on achieving a performance orientated environment was perceived to be negatively impacting on therapist workloads. Therapists interpret the 'target driven' initiative as eroding their autonomy. As clinicians they want to change things for the better for their patients and to inform their

working practices. Instead however, they perceive the 'target' initiative to be one of numerous recent initiatives that they cannot understand the purpose of and do not in fact believe that they have the time or resources to achieve. Furthermore therapists spoke of feeling both incensed and threatened by the anticipated impact a target driven environment may have upon their employment conditions.

Inadequate Resources

In the healthcare environment the amount of work that can be carried out depends not only on the individual ability of the therapist, but also on available resources, such as level of staffing and equipment. Perceptions related to resource inadequacies were perceived as providing a source of high workload and associated stress:

> "My main frustration – resources is a huge one"

> "The fact that we always seem, particularly the NHS, always seem to be working to absolute capacity and everybody is stretched and stretched and stretched – which is quite stressful and quite grinding I think"

The threat of further reduction in resources, particularly relating to space, was perceived to be both imminent and an additional cause for concern:

> "I think a lot of people are looking at space at the moment, and perhaps thinking that this room would be more suitable for something else, and that's worrying. Space ... for perhaps offices or something like that"

> "Sometimes the managers walk through and in front of patients and whoever's in the room and just say, 'well, yes we could divide this room and use this room for this and this room for.......'"

Staff shortages due to cutting costs were identified as being a particular problem and as having a negative impact on workload resulting in the perception of work-related stress:

"We're down members of staff and we've been told that some of those posts have gone permanently as part of the Trust's financial savings.... I've been by myself for coming up to 10 months and that's a long time to be totally by yourself"

"There's simply not enough of us to do the job"

There was an exception with one therapist perceiving that her department had in fact a surplus of staff members, specifically she said of her department: "Overstaffed. We've lost contracts so we've got less outpatient work, so we've got more than enough staff coming in". So what on the surface appeared to be a surplus in fact translated to being due to an unavoidable and non-voluntary reduction in service provision.

The majority observation of staff shortages is in actual fact a reflection of the existing national shortage of qualified therapy staff (DOH, 2004). The financial situation in the NHS means that trusts are being forced to make savings, which has meant cutting the number of posts. Furthermore, the CSP (2006) report that the financial deficits are having an even more serious impact on vacant posts, they report that one in five vacant physiotherapy posts were being permanently lost. Implications of this are cited by respondents within this study as being negative impacts on their workload and on service provision such as significant increases in waiting times for physiotherapy treatment are being experienced.

Environmental conditions

With regard to the environmental work-place conditions all but one therapist spoke of unpleasant physical conditions and surroundings such as shortage of space and resultant privacy issues and of too much

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auditory disturbance. All these factors were experienced as distracting and professionally limiting in addition to being perceived as stressful:

"Well environmentally it's just so restricting... It's all hot desking, you don't have any space at all for our particular needs"

"It gets quite loud. If there was a quiet room to go to for people to do discharges I am sure they could be done more efficiently"

Therapists complained of not having appropriately designated administrative workplace areas and not enough secluded space for treatment, which was related to perceptions of physical overcrowding, in that co-workers were perceived as being in too close a proximity within the workspace.

"The space issue is the big problem... no matter how many incidents we put in, how many risk assessments we do, nothing happens. It's not acceptable ... we have 4 desks and we have to do a huge amount of writing up now these days. For notes we have 4 desks for 60 staff"

The lack of psychological and physical privacy is related to dissatisfaction and the perception of stress from being in a situation that exceeds what therapists believe is the optimal level for completing even routine tasks effectively, and of having to maintain a projection of industry considering that they are working in an environment that makes them often visible to the therapy managers and other senior members of staff. Furthermore therapists reported having inadequate levels of privacy, which they perceived to have not only a negative impact on their own concentration levels but also on the efficacy of treatment as the lack of privacy was believed to cause discomfort amongst patients and projected an air of un-professionalism:

"privacy can be an issue ...I took my patient into the gym, because there is always space in the gym, but it wasn't really the most appropriate place for that patient to be treated... that was stressful at the time "

A further deficit in resources was related to the quality and availability of essential equipment. Therapists complained that they had too little equipment and what they did have was inadequate and worn.

"We have a variety of assessment tools and things which get worn and we're always told there's no money, so if you want anything new you can't have it"

"The equipment is very, very basic –the amounts that we have to keep our spending to are very, very minimum, so things are shared"

Ultimately therapists perceived that there was very little they could do about this equipment deficit except to find resources themselves:

"Our first line is to come through management and say we need some more equipment and they say 'no'"

"If you want anything new you can't have it, so, its always a bit of a, you know, we managed to find things ourselves"

Respondents indicated that they would prefer quiet workspaces that have specifically designated administrative areas and for neighbouring treatment cubicles to be relatively well spaced to ensure privacy and a reduced level of noise and distraction e.g. "It gets quite loud. If there was a quiet room to go to for people to do discharges I am sure they could be done more efficiently". This fits with the concept of overload in that if therapists were afforded privately enclosed and visually

inaccessible treatment areas, they would be able to control their exposure to overload. Furthermore, such a working environment would enable therapists to be concerned less with maintaining appearances and more to actually getting their jobs done (Sundstrom, 1980).

There was one exception to the reports of unsatisfactory environmental work-place conditions and resource deficits:

"We have wonderful facilities here, we are lucky. I don't know if you've seen, we've got a heavy workshop and a light workshop, this is our bedroom, and we've got a kitchen, so the facilities here are absolutely wonderful"

Despite working in the same environment as several of the other respondents, all of whom expressed dissatisfaction with their working environment and facilities, the above therapist interestingly perceived the same working conditions to be of excellent quality.

Training and professional development

Respondents communicate mixed awareness of developmental training opportunities, for instance two therapists report that professional training is available to them; although they believe attendance is discretionary based on clinical needs development rather than interest, as one said: "It will depend on clinical need really; if it was an area that I was required to learn this new skill and the hospital agree that is was appropriate they would fund it". A further two therapists expressed their understanding that training is not available due to a lack of funding, for example: "There's never been the money available in all the time I've been here... I think money for training is always scarce in the NHS. I think as therapists we're very good at doing our own training".

As this last therapist alludes to, informal in-house training does occur; often it seems in lieu of professional training. Respondents however, are also of mixed opinion as to the quality of such training events:

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"I think we're very good at doing in-service training...we go away and do our own learning and then present it, perhaps, to other people"

"There's in-house training once a month but I don't find the quality very good"

Knowledge and information underpin the aims and objectives of the NHS Plan which sets out a challenging agenda for all NHS staff and respondents highlighted training needs, but the mixed response given regarding the availability and quality of both professional training and in-house learning opportunities, leaves the researcher unable to make any firm conclusions about therapists' perceptions of the manner and means by which the NHS is enhancing knowledge and information.

Theme 4: Relationships at Work

The therapy professions appear to provide ample opportunity for social interaction between all levels of staff both within the department and without. The quality of that interaction emerges to be of paramount importance, in that it should enable the therapist to develop their professional expertise and professional identity without involvement being deemed interference or critical.

Co-worker support and teamwork

Therapy colleagues are perceived as an integral part of therapists working environment. Respondents are of the belief that workplace tasks are becoming more complex and demanding, and that working in teams enables them to more effectively meet the challenges of those tasks. In general, good co-worker relationships appear to have a positive impact on the quality of therapist's experiences at work, in addition to being equated with social support, as illustrated by the following comment: "...you know, your peers are really, really good because you're supporting each other". It emerged that the experience

of stress can be alleviated by the availability good social support. Support can be emotional, such as the action of caring or listening sympathetically, or instrumental, involving tangible assistance such as help with a work task.

Research has revealed the importance of social support in coping with work-related stress. High levels of support have been associated with low levels of stress in a number of studies (Cooper et al, 2001; Shirey, 2004). Two models have been proposed to explain the mechanism by which social support may have a beneficial effect on stress. According to the 'main effects' model, social support is beneficial to well-being, regardless of the level of stressors to which individuals are exposed, by meeting important human needs for security, social contact, approval, belonging and affection (House 1981). In contrast, the 'buffering' hypothesis proposes that social support moderates the effects of stressors (Wheaton 1985). Despite the fact that, empirical evidence has not been able to find consistency in the results; in some studies the main effects of support is supported, whilst in others the buffering effect, the findings from this support both models, by suggesting that relationships between stressors and stress is stronger for respondents with low levels of support than for those with high levels.

Teamwork was also experienced positively with a notable emergent theme of group cohesion, with much of the benefit of team work coming from access to shared experience, knowledge transfer and the formation of close working relationships:

> "I love the team here, I love the fact that we are a joint
> therapy service – we're not an occupational therapy service
> and a physio service, we work really well together as a
> mixed profession, we pull off each other's skills and
> knowledge and that works so very well"

The concept of social interaction within the work-place is widely conceptualised within the literature as having positive effects on people's experiences at work and is generally equated with social support (King & King, 1991; Levi, 1981). In finding that teamwork and co-worker interactions function to bolster personal resources to allow adaptive coping when needed and decrease the intensity of the experience of stress, this study supports such a contention. However, this study also found a reverse buffering phenomenon; it was found that alongside the positive effects, social interactions also have negative effects on people's experiences of work and discussion of work-related issues may sometimes lead to a more negative appraisal of the work environment.

In speaking of colleagues one therapists said: "I do find the staff that are coming through that are more under qualified and not dedicated to the service, they're lovely people and they're good but it's, 'what's in it for me'". For the most part, this therapist experienced her contact with colleagues (particularly junior colleagues) to be associated with an increase in negative personal feelings and stress as well as a decrease in job satisfaction.

The social exchange theory is useful in elucidating the process of social support and of the conditions under which social interaction is or is not perceived as supportive. The theory suggests that individuals evaluate relationships in terms of transactions of input and outcomes and whilst doing so compare their efforts to others in the transaction. Satisfaction with a relationship is more likely when there is perceived equality or reciprocity between input and outcomes of both parties. This theoretical perspective mirrors closely the perceptions expressed by respondents in this study who characterise reciprocal relationships with colleagues as being positive and supportive, whilst the one exception clearly perceives their (particularly junior colleagues) input to the working relationship as being unfavourably unequal and is associated with negative affect.

The positive relationship between teamwork and levels of support from fellow therapists, and perceptions of being able to cope, indicates that these factors have an influential role to play in alleviating some of the effects of work-related stress. However, the reverse buffering phenomenon has important implications for such success. As Beehr (1985) has suggested, and this study has confirmed, the discussion of work-related issues may sometimes lead to a more negative appraisal of the work environment.

Research indicates that people gravitate toward social relationships in which their interaction partners view them in a manner that is consistent with how they see themselves (Brown, 1993; Swann, 1992). Consistent with this research, respondents spoke of a tendency to seek out professional relationships primarily with other therapists (as opposed to other healthcare professionals) which function to confirm their professional identity and reinforce their beliefs about their status within the NHS.

Moreover finally, perceptions of a cohesive professional group(s) as exampled by this respondents observation: "we do actually work jointly as therapists – we tend to think of ourselves as 'therapists' rather than occupational therapist and physiotherapists, which is a very nice way to work" functioned to compensate for frustration experienced as a consequence of the organisational working environment.

Inter-professional relationships

Therapists' social working environment is described by them as continually changing and dynamic. However, where these social changes are perceived to be restrictive or characterised as providing negative feedback concerning the merits of the therapist contribution, relationships with colleagues (as with nurses) tended to be poor and associated with low levels of job satisfaction and increased experience of stress.

Professional status or rather lack of it was an emergent theme. Therapists felt that the therapy professions have low visibility, recognition and status and that those outside of the therapy professions are not fully aware of the effects of the therapeutic services, as demonstrated by the following statement:

"I think it's because they don't actually see what it is we do ... I think most see a very little bit and make assumptions about what we do, it's like, if they see us doing, say, a washing and dressing assessment with somebody, and they say, oh you're just helping somebody get washed and dressed in the morning ... they don't see that you're actually looking at a much wider range of things"

Recently there has been debate concerning the therapy professions core skills (Lloyd & King, 2001; Duncan, 1999; Craik et al, 1998). Although not a common theme, the following statement is interesting given such a debate: "I don't think we're very good at telling people exactly what it is that we do, so they see the little bits that they see on a day to day basis and make assumptions and we're not very good at saying, well no actually that's wrong". Duncan (1999) in writing about the profession of occupational therapy, comments that much of the aforementioned debate stems from occupational therapists having developed a negative self image in which they struggle to define their own role and it would seem that beliefs, as expressed by the above therapist, go someway to supporting Duncan's contention.

Inter-professional Conflict:
Inter-professional conflict emerged as a strong emotive theme, with four therapists describing their working environment in terms of the perceived conflict between professions and expressions of dissatisfaction due to perceived lack of interdisciplinary equality within the NHS health care environment, as the following statement demonstrates:

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"The way we work here there is a certain amount of animosity between services and the rest of the hospital it's a very nurse driven..., a very very nurse driven Hospital and Trust"

Therapists acknowledged and respected the diversity of roles and skills of other professionals in relation to their own. Therapists' did not however; feel that this respectful collaboration was reciprocal. The prevailing opinion was that other healthcare professionals held disrespectful attitudes toward the therapy professions and that other professionals, particularly nurses, were unaware of or unwilling to acknowledge the responsibilities and competencies of therapists'.

"... I think most see a very little bit and make assumptions about what we do, it's like, if they see us doing, say, a washing and dressing assessment with somebody, and they say, oh you're just helping somebody get washed and dressed in the morning ... they don't see that you're actually looking at a much wider range of things"

However, therapists themselves seemed unable or disinclined to recognise the misunderstandings and misinterpretations that they might be contributing to inter-professional tensions; furthermore, they appeared reluctant to participate in work with other professionals to negotiate and resolve inter-professional conflict but did present as willing to enter into interdependent relationships with other professionals for the provision of quality care.

It further emerged that professional status was a problem of concern, with therapists believing that other health professionals have lack of respect for the therapy professions and lack of understanding of the therapists' role. Respondents felt undervalued because their role was

neither as well understood nor accepted as other roles within the healthcare environment such as nursing, for example:

"This Trust is very nursing orientated. They actually opened a rehabilitation unit in this hospital but didn't involve therapists... It made us feel that they were very much belittling our jobs ... and, again, they didn't understand our roles, they didn't understand what we were all about as therapists"

One therapist however expressed satisfaction with her relationship with other health professionals and interestingly attributed this to good interdisciplinary understanding about the functions of occupational therapy.

"I've got a really good relationship with the two main hand surgeons that we've got here... There are two main hand surgeon consultants and two main rheumatology consultants that are very ... you know, they actually know what OT's are and what we try and do"

These findings add support to the small number of previous research studies which suggest that poor professional status or lack of professional identity appears to be a problem of particular concern in the therapy professions (Moore et al, 2006; Bailey, 1990; Bassett & Lloyd, 2001; Greensmith & Blumfield, 1989). Moore et al (2006) using a hermeneutical phenomenological approach, found that job dissatisfaction in occupational therapy stemmed from the poor profile and status of the profession and concluded that their findings and those of previous research indicate that if the profile of the profession was to be improved then "the foremost cause of discontent in occupational therapy would be addressed" (p: 25).

An implication of these findings for the NHS is that organisational changes may perhaps only be translated into positive outcomes if processes at the level of the team are effective. Barriers to the smooth function of primary healthcare teams establish within this study include concerns relating to professional identity and inter-professional issues such as conflicts and tensions concerning power, autonomy and control.

Supervision / line management

Butterworth (1994) made reference to three main functions of clinical supervision, these being:

1. A formative function linked to education and reflection;
2. A restorative function, which recognises emotional stress;
3. A normative function, which takes into account managerial and quality control aspects of practise.

It would appear however that respondents' experience of clinical supervision has been anything but the supportive and facilitative function as described above. Workplace supervision was talked about by almost all of the therapist interviewed. Therapists related that supervision was infrequent and not consistent, as illustrated by the following accounts:

> "I haven't had supervision for a long time...Well really our head had left therapy services and there was another person that has come through, but I haven't had opportunity for supervision. I don't know when there'd be time for supervision with me anyway"

Interestingly it emerged that in some instances the physical and psychological availability of co-workers are being used as a compensation for poor or lack of supervision:

"I do have a very good friend in the department, and we tend to supervise one another to be quite honest. We did find that that was our safety net. Although you weren't passing the information on to somebody who could do something about it, at least somebody else knew how you felt and perhaps talked to things and looked at things from a slightly different perspective from you"

Without exception respondents' perception of their supervision was of poor quality and limited effectiveness, which emerged as having the potential of being detrimental to both professional effectiveness and competence and to therapists wellbeing, as demonstrated by the following therapists' comments about their line managers?:

"... fobs you off, she doesn't care about helping you ... You're perfectly willing to get your head into the books, of course you are, but you can't do that all of the time, and in something like this you need a senior you can ask the advice off ... because this is important, it's people's health, you can damage people if you do things wrong"

"she could manage it better really, because yes she's transferring her stress on to me, but I have got my own stress so hers is really is adding to mine"

Furthermore therapist reported that supervision tended to concentrate solely on clinical management rather than support to help them deal with the stressors encountered daily in the workplace e.g. "It would be to go through things you wanted to achieve, it probably wouldn't be a "how are you coping with everything?"", which if available, they believe would have some benefit in buffering their experiences of work-related stress. Instead therapists describe resorting to sourcing this type of support from co-workers.

Therapists acknowledged that their experience with supervision has been disappointing; they indicate that senior members of their teams who have acted in the role of clinical supervisor have variously been unprepared, uncommitted and unavailable for the role. The problem is compounded by the unstructured approach to the provision of clinical supervision and by the lack of opportunity for the clarification of the responsibilities of supervisor and supervisee. However, although formalisation of a supervisory system did not register high on the respondents list of primary concerns about their working environment, the level of commitment, professional support and overall competence of clinical supervisors did emerge as an issue requiring positive action in order to facilitate professional development.

Research on psychosocial work-related stress illustrates that supervision may have a significant impact on employees personal and professional outcomes (O'Driscoll & Beehr, 1994), particularly in buffering the negative effects of work-related stress for example, in the field of nursing Duxbury et al (1984) and Bakker et al (2000) found that a leadership style that is supportive of the needs of staff nurses can buffer the effects of a demanding work-environment, and reduce levels of work-related stress. An outcome of particular relevance in this study is the finding that when formal supervision actually takes places the focus of such sessions was reported to be clinically orientated, although many therapists indicate they would benefit from additional emotional support. This corresponds with Grace et al's (2001) finding that there exists a large gap between what occupational therapy supervisees expect from supervision and what they actually receive.

Theme 5: Job Satisfaction
An extremely interesting finding is that all ten respondents expressed feelings of intrinsic job satisfaction, which appears to be robust, in that job satisfaction sourced from intrinsic factors was expressed even when therapists perceive themselves to be experiencing high levels of work-related stress:

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Job dissatisfaction was expressed concurrently with expressions of job satisfaction, whereas satisfaction was perceived to be brought about by the intrinsic job factors mentioned above such as, recognition, patient contact and attaining therapeutic goals, dissatisfaction was perceived to be caused by work factors extrinsic to their practitioner clinical roles: .

> "It has become very stressful and it shouldn't be so stressful, but I still enjoy trying to improve that person's life – and that's what's important at the end of the day."

Interestingly, when probed about the sources of job dissatisfaction therapists talked about the same workplace factors that they attributed to causing workplace stress. When directly asked about what they perceived to precipitate work-related stress, for instance one therapist said: "I think it's a combination … staff shortages, resources … and personally, my time management." And another said: "I think it's a time issue, not being able to do admin jobs, discharge, service to my development stuff that I haven't got time to do".

In support of the finding that intrinsic job factors are perceived as the primary source of job satisfaction for therapists in this study, Akroyd et al (1994) whilst investigating intrinsic and extrinsic predictors of work satisfaction in ambulatory care and hospital settings found that the degree to which physiotherapists and occupational therapists found work-related tasks interesting to be the single most predictive factor of job satisfaction. They also found that therapists rated the intrinsic factors of work-related interest and reward to be greater sources of job satisfaction than extrinsic factors such as working conditions, relationship with co-workers and salary.

In fact, the few studies of job dissatisfaction within occupational therapy literature all support the link between extrinsic job factors such as poor working conditions; high workloads, lack of resources with perceptions

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of job dissatisfaction (Bordieri, 1988; Jenkins, 1991; Pringle, 1996; Greensmith & Blumfield,1989; Bailey, 1990; de Wesley & Clemson, 1992; Freda, 1992).

Intention to leave

Overall the majority of staff expressed their intention to remain in post; however a number of therapists explicitly stated their intention to leave either their current job or practice within the NHS as a whole:

> "Well they've got to the point where I've actually handed me notice in two weeks ago … I feel that I have been asking for help for a very long time"

> "I would probably seriously think about going away from the National Health Service sector if my current work commitment continues"

According to these therapists their decision to quit was overwhelmingly influenced by work-related stressors such as high work load, and of the high levels of stress and job dissatisfaction they consequently endure. This ties in with previous work that has found intent to quit has a strong inverse relationship with job satisfaction and a positive relationship with stress (Shields and Ward, 2001; Halfer D, Gradf, 2006). Shields and Ward (2001) found that nurses who report overall dissatisfaction with their jobs have a 65% higher probability of intending to quit than those reporting to be satisfied.

The National Health Service (NHS) is continuing to experience recruitment and retention problems of nursing and allied health profession staff (Coombs et al, 2007). Consequently, the need to study and understand the key factors that encourage or dissuade people to work for the NHS remains a major research and policy issue. Coombs et al (2007) using a quantitative questionnaire study, found that the strongest predictor of intention to work for the NHS in one of three

professions (physiotherapy, nursing and radiographer) was the attitude held by respondents. These attitudes in turn were most influenced by the extent to which people perceived that NHS work as a qualified nurse, physiotherapist or radiographer offered positive features, i.e. rewarding career, teamwork and a chance to help people and to get to know them.

Although retention is widely discussed in the literature, multiple antecedents to intention to leave are rarely examined together. Probst and Griffiths (2007) however, state that ensuring positive features, similar to those cited by Coombs et al (2007) such as, mental challenge through job design and continuing professional development opportunities is vital to retaining staff. Support from immediate managers is also a crucial aspect of workers development of intentions to leave. Manager support can moderate experiences of job stress, limiting job dissatisfaction and reducing leaving intentions.

Interestingly, it is a lack of the positive features cited by Coombs et al (2007) and Probst and Griffiths (2007) that are referred to by respondents in this study as being contributory to their experience of work-related stress, which is cited as the primary antecedent to their intention to leave.

Theme 6: Home – work Interface

Home-work conflict is a type of inter-role conflict that occurs as a result of incompatible role pressures from the work and family domains. The most frequently reported form of home-work conflict by respondents was time-based conflict. Therapists have finite resources in terms of time and energy, and work demands are clearly taxing those resources. The interface between work and home, where predominantly stressors from work are spilling over into home life, clearly impacted on the respondents within this study, with therapists indicating that workload burdens impact upon their wellbeing away from work and moreover the

interface is perceived to be a potential antecedent to the experience of stress:

:

> "I take work home, or I stay here till it's done... Like last night
> I had a daughter at hockey training so I took an hours worth
> of work and did my work there while I was waiting, efficiency
> of time I call it, it's like a military operation, it's actually quite
> funny"

> "she's going to school an hour early just so I can have lunch, I
> do not want to go without lunch 3 days a week, that's not how
> I want to do things, so I have to look after No: 1 a bit"

To a lesser extent respondents were aware of stressor from home impacting upon work performance and of the wider implication of this, particularly in terms of perceptions of demand:

> "I've seen my colleagues at work that have got a lot of
> stresses at home and they're perhaps not able to do their job
> as efficiently as some of the others, so you have to carry
> them"

Interestingly over a decade ago Brook and Williams (1996) published a similar finding; they found that stress experienced as a consequence of work was reported to negatively impact upon respondents' home-life, with therapists expressing difficulties in leaving their problems at work and consequently venting their frustrations on family members. This present study has shown that managing the interface between home and work continues to be a potential source or exacerbator of stress and is, for the respondents in this study, a persistent problem.

Control over tasks and time is important element in facilitating work-life balance. Galinsky and Stein (1990) found that employees who have the power to solve work problems are likely to suffer lower stress and feel

their job causes less interference with their life, while Thomas and Ganster (1995) found that schedules which gave a group of nurses more control over their time reduced work-life conflict and symptoms of stress. The NHS Improving Working Lives initiative (Department of Health 2000) is informed by the government's Work-life Balance campaign, and advocates help for employees to better manage their work and non-work time. By offering a range of working patterns and being supportive of employee's non-work responsibilities it is suggested that employers such as the NHS can improve their staff morale with the result of increased productivity, retention rates and reduced absences (Bevan et al. 1999; DTI and Scotland Office 2001). It would seem however, in clinical jobs where tasks are time critical, it is more difficult to control work rate or where the work is carried out and therefore to operate policies like flexitime or home working.

Theme 7: Coping

All interviewees gave account of the efforts they employ to tolerate or reduce work-related stressful events. Active problem solving was the most frequently represented coping strategy utilised by therapists, with over half of the respondents describing 'prioritising' as the main problem solving effort employed to alleviate stressful demand or encounters, as revealed by these therapists:

"I really try to concentrate on prioritising ... I do try to get everything into perspective and try and take active measurements to control my diary because that was one thing that seemed to be out of control"

"I've actually been trying to set my diary much much better and actually planning my days much better myself so I've just really been time managing myself, so that I'm not overloading myself"

The use of avoidant and resigning coping strategies however, as used by these therapists: "You kind of have to retreat" and "Most of the time I think, Ok, there's nothing I can do about that" were claimed by an almost equal number of therapists and exactly half of the respondents). Furthermore it emerged that when avoidant and resigning coping strategies were used they resulted in no reduction in the level of stress experienced and potentially even higher levels of distress due to the continued demand or stressful situation. For example, this study found that therapists, who had recently resigned from their job as a consequence of work-related stress, spoke of utilising predominantly avoidance and resigning coping strategies.

A common approach to ascertaining the function of coping behaviours is to evaluate them on the basis of their outcomes. Inductive evaluation of coping strategies and behaviours from respondents' own accounts of what they have done to manage stressors within the workplace, reveal that active problem solving results in more favourable outcomes for the individual and are therefore deemed more effective than avoidance or resigned coping. A problem with this conclusion however, is pointed to by Cooper et al (2001) who explain that problem focused coping strategies are often linked with situations that are perceived as controllable by the individual whereas, avoidance and resigning coping strategies have been associated with situations where there has been little opportunity for the individual to apply control, hence a lower probable favourable outcome. Interestingly, corresponding to Cooper et al's (2001) assertion, respondents within this study who perceived themselves as experiencing low work-related decision latitude, described themselves as utilising primarily avoidance and resigning coping strategies and behaviours. In conclusion however, the findings suggest that problem focused coping more than avoidant and resigning coping increases the probability that an individual will perceive a situation and related demand to be within their control and therefore appraised as effective.

3.4.6 Study Limitations and Strengths

Limitations of the study relate to it being in essence a small scale exploratory study. For example, generalisability of these findings to the wider population of physiotherapists and occupational therapists is limited, in view of the fact that small qualitative studies are not regarded as generalisable in the long-established quantitative sense. The transferability and applicability to other settings of the findings of this study are therefore low. Myers (2000) on the other hand, contends that partial generalisations may be possible to similar populations. It is this author's belief however, that these limitations are mitigated by the underlying principles of qualitative research. For example generalisability and transferability should not be a primary concern of qualitative research, as Adelman et al (1980) said; the knowledge generated by qualitative research is significant in its own right.

The sampling methods used may have introduced bias into the findings. For example, as volunteers the respondents may not represent the views of all therapists within the trusts. They may have volunteered because they had particular unrepresentative views on certain issues. For example, this may have led to an over estimation of work-related stress as respondents had a vested interest in taking part and making their concerns felt.

Britten and Fisher (1993) argue that one of the major concerns in qualitative research is measurement bias. Popay et al (1998 p.348) remark that "given the involvement of the researcher, the question is not whether the data are biased but to what extent the researcher has rendered transparent the process by which data have been collected, analysed and presented". They conclude by saying that although other researchers may not share the same interpretation of qualitative data, they should be able to follow the interpretive process applied by the primary researcher.

In accordance with this advice and with the intention of enabling the readers own judgment as to the value and relevance of this research, a clear and concise account of the research procedure is provided along with a detailed account of the process of analysis undertaken, supplemented with a record of text considered to embody the emergent themes.

Johnson & Waterfield (2004) state that researchers cannot avoid informing the research process with value positions and as such, different researchers might reach different conclusions when examining the same data. In response to this and to demonstrate rigour, a procedure of independent coding (similar to inter-rater reliability) was implemented (as detailed in the methodology section of this study). Three researchers were able to confirm the data by reaching the same interpretations of meaning and significance. Moreover to test robustness and completeness of the emergent themes, the findings were exposed to peer review by consulting with two further researchers working in a similar field. No alternative interpretations were offered suggesting that the themes identified are comprehensive, thus enhancing dependability.

The researcher does not intend to claim to demonstrate neutrality, but does wish to make explicit the process by which the findings were revealed, meaning that all effort was made to render the process of data collection and analysis transparent and auditable, with the intention of providing the evidence for sound qualitative research.

In addition it should be noted that males were under-represented in the sample.

3.5 Discussion

With the limitation of the study acknowledged some interesting findings are revealed. The overall aim of this study was to examine therapists'

representations of their psychosocial working environment and of issues relating to stress experienced as a consequence of work. The following research questions were posed:

1. What are therapists' representations of their working environment?
2. What are the perceived antecedents to work-related stress?
3. What protective factors within the psychosocial work environment are perceived to mediate the relationship between work and stress?
4. What are the outcomes of work-related stress for therapists?

Qualitative research has been described by Benoliel (1984) as "modes of systematic inquiry concerned with understanding human beings and the nature of their transactions with themselves and with their surroundings" (p.3). This study had the goal describing the complexity of the lived experience of physiotherapists and occupational therapists within their work environment, and in pursuit of this goal has elicited meaningful information that has enabled a lucid picture of the psychosocial environment. The preceding section (findings) introduced and discussed the emergent categories and themes constructed from respondents lived experience and of the meanings they attach to these experiences. The following discussion will use these to construct answers to the above research questions.

3.5.1 What are therapists' representations of their working environment?

It is clear that change is a constant and unwelcome part of working as a therapist within the NHS. Perpetual change was believed to be a problem by the majority of respondents, for both themselves and in terms of the negative impact on service delivery.

What is clear from the broader literature about the human consequence of organisational change, is the uncertainty, increased anxiety, and lowered job satisfaction that such change provokes in individuals. In exploring the literature there was very little evidence of the positive effects such a change can have on staff with brief reference to 'some will view change as an opportunity to improve an existing situation that is considered intolerable or dissatisfying' (Marshall, 2009). This opportunistic view however, is not voiced by any respondent in this present study.

Organisational change is seen here to be unsettling and causes considerable disturbances to therapists and their patterns of working, and these effects are further multiplied by the introduction of re-organisation into areas where the effects of previous changes are still felt, as has been identified from Agenda for Change issues discussed in the previous findings section. One of the issues to emerge from this study was in relation to the continual pattern of change therapists felt the NHS had experienced. Cortvriend (2002) suggested that despite the fact that people are no longer shocked by the announcement of changes in the organisation, they nevertheless appear to remain affected by such declarations. Drucker (1981, cited by Wilson and Rosenfeld 1990) noted that the capacity for individuals to handle change is limited. This varies from person to person, but even the most receptive individuals can easily reach the limits of their tolerance.

Resistance to change emerged in response to its enforcement and lack of participation in its implementation. Resistance was characterised by lack of trust which appears to have developed partly as a consequence of inadequate organisational level communication about objectives, which led to uncertainties regarding the processes of change being implemented. Therapists' stated that they did not fully know the purpose behind implemented programmes for change and as a consequence the related workload was perceived to be intrusive and disruptive. Therapists generally expressed the desire for more information; they

wanted implemented processes to have foreseeable and identifiable outcomes, and confirmation that they will be fairly treated when the outcome(s) is achieved (i.e. that wages will not be lessened after the implementation of Agenda for Change). These findings suggest that large scale changes in the NHS enacted nationally may not always be made with sufficient forethought or sensitivity to local context, and that change may take place for the sake of change.

Therapists are clearly expressing a set of perceptions, expectations, and beliefs about what they should be entitled to from the NHS as an employer in relation to what they feel they are obligated to give in exchange for the NHS's contributions. In this context therapists are expressing a perceived breach of psychological contract (PC: Rousseau, 1995) being committed by their employer; in that the NHS is believed not to be adequately fulfilling its obligations to therapists. Their response to this breach of contract is a reduction in organisational commitment and partial withdrawal from organisational citizenship behaviour expressed through resistance to organisational change. This provides valuable insight into how staff feel when let down by the change in the employment relationship that they had come to accept as the 'norm', and such responses in relation to the Psychological Contract suggest that more attention needs to be paid to this in NHS organisations.

Significantly, therapists perceive themselves to be at conflict with the organisational ethos and culture, which has given rise to feelings of resentment, negative perceptions, suppressed anger, as well as separation and alienation from the organisation that is the NHS. These feelings have fundamentally, for a large number of respondents, informed their decision to leave the NHS as an employer.

Sarros et al (2002) state that the concept of work alienation is an anathema in today's workplace because of the emphasis now placed on empowerment of the individual employee. Conversely however, this

study shows that UK therapists' perceptions of increased organisational bureaucracy and hierarchical rigidity, that they believed now characterises the NHS, has brought about feelings of psychological and motivational alienation. In support of this finding, previous research indicates that inflexible organisational structures contribute to work alienation (Sarros et al, 2002; Aktouf, 1992; Bass & Avolio, 1990; Garber & Seligman, 1980; Kanungo, 1982) and Kanungo (1992) writes that organisational management practices that reinforce an 'instrumental, unitarist view of employees and their contribution 'cripples' the workers by disabling them' (p: 415). This psychological and motivational separation, as a result of organisational rigidity and bureaucracy has been manifested by therapists as dissatisfaction, powerlessness, and low levels of organisational commitment.

Additionally, analysis of the emergent themes in the previous section concluded that work-place identity in the perceptual sense is not a unidimensional construct. It emerged that organisational identity is perceived to be distinct from professional identity and a clear dichotomy of these multiple identities appears to exist. Organisational identity is defined as an individual's sense of oneness or belongingness with an organisation (Puusa &Tolvanen, 2006) whereas, professional identity refers to the therapists' concept of what it means to be a therapist. It emerged that therapists are very much committed to their professional identity as 'clinical practitioners' and that this occupation specific identity has important implications for their sense of work involvement, work-related commitment and professional satisfaction. However professional and organisational responsibilities have become fragmented and dichotomised and as such managerial duties and administrative duties are believed to be components of their organisational role that are perceived as being peripheral to that of being a clinical practitioner. These organisational responsibilities were experienced as frustrating tasks imposed upon them by uninformed top-down managerial decisions about the content, terms and conditions of the therapist role that are perceived to simply function to engender dissatisfaction.

Furthermore, organisational conditions and climate emerge as clearly linked to the construction of both organisational and professional identities. Currently the therapists' professional role is perceived as being challenged by new ways of organising and regulating the workforce. For example, a number of recent government policies, particularly the Agenda for Change and the organisational emphasis placed on achieving targets, are believed to be challenging traditional working practices. Professional ways of working are perceived as being eroded as organisational structures are continually reviewed and revised by a more demanding NHS and the rise of managerialism is replacing long established forms of professional accountability and organisational autonomy. Furthermore, the rise of NHS consumer-orientation is forcing therapists to re-evaluate what they can offer as clinicians and to become more focused on organisational performance outcomes, targets and turnover.

These changes to the work-place environment and workforce design have presented therapists with the challenge of redefining their professional and organisational identities. The perceived lack of control over the re-definition of their professional role poses difficulties for therapists' understanding of their professional identity and has resulted in outcomes such as role conflict and ambiguity. This insight further suggests that the identity conflict experienced by therapists may be a contributing factor to the finding of professional insecurity expressed by respondents.

Within the context of this qualitative study not only was it found that work place identities are dichotomised, but also that the psychosocial work environment of therapists is characterised by dichotomies. For example: psychological demands are well within therapists' professional capacities, but quantitative demands are perceived to be burgeoning beyond individual capacity. Therapists practice with satisfactory levels of professional decision latitude and autonomy, alongside however,

inadequate levels of organisational influence. Furthermore, good quality social support is received from co-workers although support from supervisors is inadequate. A balance is achieved between efforts expended through professional clinical practice and personal reward received, although there exists an imbalance between efforts expended at organisational level and rewards received from the organisation in exchange for these efforts; and finally, predictability of work within the framework of clinical practice, but an ambiguous future of ongoing change within the NHS.

As stated previously, therapists voiced resistance to the implementation of policies informing change within the NHS, which manifest as therapist being decidedly unenthusiastic about exerting work effort in support of current NHS initiatives. However, interestingly a strong identification with profession specific aims and values resulted in therapists being enthusiastic in exerting efforts in pursuit of clinical excellence therefore, suggesting that therapists are selectively adopting goals and values of a profession specific sub-set within the overall health care ethos of the NHS.

To reiterate, work identity was found to be dichotomised with therapists having a stronger professional identity than with the NHS as a whole. In fact, the overarching theme of dichotomisation between profession and organisation was found to continue within therapists' manifestations of professional and organisational commitment. Professional commitment refers to identification with, and involvement in, one's occupation rather than to the employing organisation (Muthuveloo & Che Rose, 2005), whereas organisational commitment is defined as employees' acceptance, involvement and dedication towards achieving the organisation's goals. It is the willingness of employees to accept organisational values, and goals, and to work towards achieving these; to be fully involved, and participate, in all the activities, both work and non-work related, of the organisation; and to dedicate time, and effort,

towards the betterment of the organisation. (Herscovitch and Meyer, 2002)

Therapists emerged as have strong affective commitment to their profession, evidenced by their emotional attachment to, identification with, and involvement in, their professional role (based on positive feelings and emotions, toward their profession). The antecedents for affective professional commitment include perceived professional characteristics (task autonomy, task significance, task identity, and skill variety), and perceived professional autonomy (extent to which therapists feel they can influence profession specific decisions and other professional issues of concern to them).

However, despite being highly committed to their profession, therapists did not emerge as active and willing participants within the organisation that is the NHS. Rather than expressing organisational commitment as a consequence of belief in and acceptance of the NHS organisational goals and values, therapists spoke of being 'tied' to the NHS through their commitment to their profession and due to the fact that the NHS provides them opportunity to practise their profession. It appears that for therapists within this study there exists crucially a differential degree of professional and organisational commitment.

Fisher and Ashkanasy (2000) and Michie and West (2004) found that a variety of employee commitments are adversely affected by negative emotions at work and positively influenced by positive emotions. And, Muthuveloo & Che Rose (2005) identified that employee perception is the foundation of employee motivation, leading to higher organisational commitment, and that employee perception forms the antecedent of organisational commitment. Positive employee perception leads to improved employee motivation, which, in turn, leads to higher organisational commitment. This study supports this contention that employee perception is an antecedent of organisational commitment; but in an inverse way, in that the evidence suggests that negative

employee perception leads to poor employee motivation, which, in turn, leads to lower organisational commitment.

As therapists' organisational roles are in transition it appears that the strength of group professional identity is reliant upon interdependence and co-operation between members. Almost invariably within-professional relationships were appraised as fundamental to the preservation of workplace stability and coherence. The value placed on the professional identity shared by therapist's means that other therapists are seen as allies, which has resulted in the establishment of supportive and highly valued within-group professional relationships. Further it was found that perceptions of a cohesive professional group compensated for frustrations experienced as a consequence of the problematic organisational working environment. It appears that conflict with the organisational culture has given rise to positive inter-group relations.

Relationships however, with non-therapist colleagues, particularly nurses are conversely characterised by hostility and discrimination. Therapists express their willingness to co-operate with nurses to achieve good practice and to enable good care for patients, but do not buy into a shared 'health professional within the NHS' identity. Respondents, recognise the need for interdependence and shared purpose, however it emerged that they showed little appreciation of the roles and responsibilities of other healthcare professionals. There appears to be a number of structural and attitudinal barriers standing in the way of mutually respectful teamworking. The problems include: separate lines of management, lack of professional mutual role understanding and respect, and deep historical professional divisions. Such issues of professional division and perceived status are salient amongst the therapists interviewed but also they believe amongst their healthcare colleagues. Stokes (1994) suggests that attitudinal barriers to teamworking, function at an unconscious level and are a product of

different backgrounds and training which shape values, attitudes and priorities.

Of importance, it emerged that another barrier to mutually respectful teamworking is the perception of a non-supportive organisational context. Carter and West (1999) suggest that teamworking functions best in an organisational environment that promotes a flat hierarchy, however as Jones (1999) recognised, the NHS has, since the mid-1980s, been subject to progressive "managerialism", which has consequently fostered a 'hierarchical' culture across all staff groups. Moreover, teams are competing for resources, such as funding and space, which has functioned to make competition between professions more salient than effective multidisciplinary team work.

The evidence unearthed in this study suggests that teamworking appears to buffer therapists against the inherent stresses associated with the content of their work. However, the organisational context of their working environment is a significant barrier to mutually respectful teamworking.

Therapists' meaningful identification with their profession has generated a strong shared identity even across sub-specialities. There is a real sense that they have developed their own professional sub-culture nested within the NHS which demands specific normative standards from the members. These are symbolised by shared professional prototypical characteristics and apparently internalised therapeutic goals and values, such as the driving principle of achieving good clinical practice. As a professional group therapists evidenced specific views about the hierarchical placing of their professions within the NHS that is decidedly subordinate in respect to other health care professionals, most notably nurses. They believe that whereas their professional status should command respect they are instead struggling for professional recognition.

The research findings from this study enable a degree of comparability against those theories reviewed earlier in the thesis. Particularly the demand-control model (Karasek & Theorell, 1990) and the model of effort-reward imbalance (Seigrist, 1996), and of the factors that should either constitute an optimal psychosocial working environment or conversely the worst. It is evident that for therapists in this study, 'profession specific' work provides the right mix of work-place characteristics (these being: high but not too high demands, skill variety, decision latitude and autonomy, social support, role identity, minimal job ambiguity and a balance between effort and reward) to be a positive experience that stimulates their motivation and role commitment. Conversely however, by offering the opposite mix of work-place characteristics for organisational level work the NHS settings sampled are creating an environment for therapists that expose them to a series of antecedents that are known to underpin stress (Kahn and Byosiere, 1992).

3.5.2 What are the perceived antecedents to work-related stress?

The work environment was characterised as being a significant source of stress and one that is perceived to be increasing due to recent and rapid changes within the NHS. Representations of work-related stress emphasised situational (as opposed to dispositional) determinants. Respondents maintained that work-related stress was related to the organisational climate and structure of the NHS and specifically the conditions created for therapists by the new ways of organising and regulating the NHS, such as the need for a faster pace of work, greater pressure to achieve (targets) increased managerialism and erosion of resources. Attitude toward organisational change was characterised by overall negative evaluative judgment of the NHS change initiative implemented within the trusts. When employees possess a strong, negative attitude toward change, they are more likely to resist, oppose,

scorn, thwart, and attempt to sabotage the change initiative (Lines, 2005).

The problems of the therapists' psychosocial environment are as a result of organisational instability due to an ongoing process of change in response · to government policies for improvement; and as a consequence of the organisational adoption and implementation of ill-defined objectives that promote the emergence of insecurity and instability amongst employees. The changes have facilitated an increase in employee workload demands, particularly as an outcome of having to meet externally set targets, in a work environment that is perceived to be ill-equipped with resources and inadequately staffed.

During the change work environment has *higher ambiguity and higher* conflict because employees don't know about their future in the firms and don't know when the change finishes. Ambiguity is evidenced by the fact that respondents are unclear how they fit into the NHS as an organisation and are unsure of any rewards no matter how well they might perform. Ambiguity manifests itself in a general confusion about appropriate objectives, a lack of clarity regarding expectations, and a general uncertainty about the scope and responsibilities of the job.

The changing work environment has presented respondents with a unique set of workplace stressors. Jimmieson et al (2004) point to the fact that organisational change by its very nature is not linear, and that the most frequent psychological state resulting from organisational change is uncertainty.

Indeed, respondents did express feelings of uncertainty over many different facets of their changing work environment. For instance, role conflict was experienced, given that the expectations of the new organisation, i.e. target driven culture, seemed to be in direct contrast to the expectations of the old organisation i.e. healthcare minded culture. Similarly, role ambiguity was experienced as respondents felt that the

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expectations applicable to the old organisation have not been replaced with clear expectations set by the new organisation. Therapists were also experiencing role overload because new job duties (particularly administrative) go beyond employees' current work demands. In addition to experiencing uncertainty over the nature of present and future job responsibilities, respondents also perceived organisational change as a potential source of threat to their personal career paths and financial well-being (Agenda for change).

The body of literature dedicated to the understanding of organisational change is extensive. Noteworthy is the fact that until recently much of the research focusing on issues relevant to organisational change has focused on organisational-level concerns rather than individual-level concerns (Judge, Thoresen, Pucik, & Welbourne, 1999; Vakola, Tsaousis, & Nikolaou, 2003; Wanberg & Banas, 2000).

However, as Vakola & Nikolaou (2005) state, organisational change strains not only the organisation as whole but also individual employees within the organisation. Failure to take into account the impact of change process on individuals resulted in employees experiencing stress and cynicism, each of which has the reduced organisational commitment, job satisfaction, trust in the organisation, and motivation. Kouzes and Posner (2002) indicated successful change requires employees to be intrinsically motivated, able to see change as a learning opportunity, and feel as though they have control over the change process. A state not yet reached it seems by the respondents in this study.

In effect, all emergent psychosocial antecedents to work-related stress are factors conceptualised as being external to profession specific job characteristics and are all factors related to the context of work such as job design and work organisation, all of which therapists felt they had little or no control over. In contrast, intrinsic job characteristics, particularly the performance of clinical tasks that make-up the

therapists' role, in addition to perceptions of control over clinical decisions, emerged as both rewarding and empowering. Profession specific work demands were strongly associated with meaningfulness of work; and without exception therapists expressed a professional ethos that accepts the clinical demands encountered whilst meeting the physical and occupational needs of patients, as inevitable challenges that must be met in order to professionally develop. In fact, personal rewards gained by meeting clinical demands amongst other profession specific characteristics were described as compensatory to the deteriorating psychosocial environment, whilst furthermore attributed as significant motivational factors for remaining as an employee within the NHS. Indeed, the professional 'clinical role' defined therapists' objectives for working in the NHS rather than an affiliation to the NHS as an organisation.

Nonetheless, for a surprisingly large number of respondents the rewarding aspects of their jobs were overshadowed by the pervasiveness of work-related stress. These therapists had either handed in their notice or declared an intention to leave. Almost all of these therapists however, expressed their intention to remain affiliated with their profession but located either external to their current work-environment or away from the NHS as a whole.

In summary, the following statement by Karasek (1990; p. 9) provides a succinct overview of the respondents' perceived antecedents to work-related stress: "It is not the demands of the work but the organisational structure of the work that plays the most consistent role in the development of stress".

3.5.3 What protective factors within the psychosocial work environment are perceived to mediate the relationship between work and stress?

Intra-professional relationships were perceived to be a significant source of social support. The nature of the support provided was recognised to be both emotional and instrumental, both of which were typically viewed as having a positive and meditative impact on the relationship between work and stress. Although, it should be noted that despite therapists interpreting social support as a positive feature of their work-environment, accounts of certain circumstances whereby the topic of conversation reaffirmed the aversive nature of the work-environment i.e. talking about how stressful their job is, actually appears to have exacerbated rather than reduced the amount of stress experienced. On the whole however, as evidenced by therapists when talking about co-worker support and teamwork, they perceived work-related social support as serving an indirect protective function by contributing to lower levels of perceived work stress and greater use of active coping.

Furthermore, this study yields anecdotal support for both the buffering hypothesis - that is that social support mediates against the effects of work-related stress and the costs of non-support hypothesis - that is that conflicting social relationships negatively influence stress outcomes. Support was found for both hypotheses: social support from fellow therapists and relational conflict with healthcare co-workers such as nurses appeared to influence respondent's appraisal of sources of stress at work.

Therapists utilised a number of both problem-focused, emotion-focused and avoidance-type coping strategies to cope with events that were appraised as stressful. Typically, stressful events were often perceived to be amenable to active efforts to resolve the problem or change the situation. Coping in this context can be seen as a preventative strategy

rather than just a reaction; an effective means of reducing work-related stress if it is anticipated. However, the more persistent stressors perceived to be resistant to active problem-solving discouraged attempts at positive coping. It appears that problem-focused strategies may not be efficient in situations where the individual has little control, like in situations whereby change is imposed by the organisation. In such circumstances the stressful impact was lessened by either denying the implication of the stressor or event, or by avoidance techniques to distract thinking away form the impact of the stressor. The emotion-focused and avoidance strategies can therefore be adaptive in handling the feelings of powerlessness in uncertain situations however; Folkman and Lazarus (1986) suggest that whilst emotion-focused coping may be maladaptive in the long term. Moreover, it ought to be noted that respondents who adopted strategies of avoidance and dealt with stress by disengaging rather than confronting the situation (particularly in profession specific circumstances whereby the stressor may possibly be controlled) perceived their stress levels to be higher and more acute than those respondents who more often than not adopted problem-solving strategies.

It would seem, then, that avoidance and emotion-focused strategies for coping with stressful events may have short term benefits but potentially long term negative consequences. However, on the whole, neither positive coping nor avoidance-type coping strategies were utilised exclusively; rather their implementation appears to be dependant upon an individual's appraisal of the situation.

3.5.4 What are the outcomes of work-related stress?

Experiencing stress as a consequence of work was represented as a negative feature of the work-experience, and one that negatively impacted on an individual's emotional and physical well-being. Although causes of work-related stress were perceived as being largely organisational, in accordance with Kinman and Jones (2005) the impact

of work-related stress was represented primarily in terms of the effects on the individual rather than organisation outcomes.

Perceptions of a strong causal link between work-related stress and ill-health were commonly expressed. Therapists' readily made the association between minor physical and emotional conditions such as headaches, stomach upsets and anxiety. Furthermore these conditions were reported to be experienced by therapists as regular outcomes of work-related stress. Conclusions about the causality between aspects of work-stress and psychological and physical health outcomes are beyond the scope of this present study however, the suggestion of a negative relationship between perceptions of work and the experience of work-related stress can be made from the accounts given by therapists. This findings is supported by previous quantitative studies (conducted amongst non-therapy professions) that show stress arising from factors such as, role ambiguity and role conflict is associated with job dissatisfaction, lack of self confidence, lowered self esteem and intention to leave and stress (Hughes, 2001; Sutherland and Cooper, 1988; Babin & Boles, 1996; Jamal, 1984; Sutherland & Cooper, 1988; Yousef, 1999).

A further outcome of work-related stress emerged as a negative interface between work and home-life. As mentioned previously, work-home conflict refers to situations where the demands and responsibilities from work and home roles are mutually incompatible in some respect. Work–home conflict can occur in two directions. Home life can interfere with work life, and work life can interfere with home life. Recent reviews of the literature (Bellavia & Frone, 2005; Frone, 2003) and meta-analyses (Byron, 2005; Mesmer-Magnus & Viswesvaran, 2005) support the suggestion that that workers can discern the difference between work interference with family and family interference with work and that these are distinct concepts. The direction that seems to have the most impact on respondents in this study was work life interfering with home life. It was found that higher *levels of quantitative*

role overload and extensive time commitments experienced at work were perceptually related to therapists' experiences of work-home conflict. For example, work interfering with family because respondents are preoccupied at home with problems at work or when work schedules make it impossible for them to attend family activities or complete household chores.

There is a body of research examining how work-related stress at work can 'spill over' into the health care employees' home-life and is associated with a variety negative consequences such as lower job satisfaction (Kovner, Brewer, Wu, Cheng, & Suzuki, 2006), fatigue (Demerouti, Bakker, & Bulters, 2004; Jansen, Kant, Kristensen, & Nijhuis, 2003), and emotional distress or depressive symptoms (Frone, 2000; Frone, Russell, & Cooper, 1997; Grzywacz, 2000). These same outcomes have been linked to poor performance by health care providers (Firth-Cozens & Greenhalgh, 1997) and have been implicated in medical errors (Pani & Chariker, 2004). Therefore, work–home conflict has significant potential to undermine employee's physical and emotional health as well as perhaps affecting their ability to provide high quality care (Killien, 2004). Turning to antecedents, the structural and organisational demands of nursing, such as organisational restructuring, and staffing shortages, are associated with elevated work interference with family (Burke & Greenglass, 1999; Fox & Dwyer. 1999).

This body of research however; has excluded physiotherapist and occupational therapists. The lack of a clear understanding of proportion of therapists who experience work–home conflict or how frequently therapists confront work–home conflict is problematic both conceptually and practically. The inability to describe how frequently work– family conflict occurs undermines the ability to conceptualise the phenomenon accurately: researchers have not determined if work–family conflict is a chronic phenomenon in that it recurs day after day, or if it is more episodic in nature. Practically, the lack of a precise quantification of

work–home conflict undermines the ability of employers and the therapy profession to characterise the scope of the problem within physiotherapy and occupational therapy. Also, as other researchers begin to better quantify the frequency of work–family conflict in other occupations, it will be possible to determine if work–family conflict is greater among therapists than non-therapists. So for the moment there are no clear estimates of the proportion of therapists who experience work–home conflict and how frequently it arises. This study at least can however; acknowledge the incompatibility between therapist's work-related stress and perceptions of personal well-being at home. Furthermore, this emergent work-home conflict is perceived to have a causal and reinforcing impact on therapists experienced of stress.

Dissatisfaction with their job conditions was manifest by a notable minority of therapists by resigning their current position and/or quitting practice within the NHS as a whole. According to these therapists their decision to quit was overwhelmingly influenced by work-related stress. Previous studies have focused on examining the relationship between hospital staffing and job dissatisfaction and intention to leave (Larrabee et al., 2003), practice environment and job satisfaction (Manojlovich, 2005), and organisational climate and intent to leave in intensive care units (Stone et al., 2007). Overall, and as found anecdotally in this study, work-related stress has a strong relationship with intent to leave (Coomber & Barriball, 2007).

In the light of the consistent implication of stress influencing intention to leave and turnover, an effective reduction of stress is necessary to successfully address retention. A full understanding of the stress phenomenon is perhaps necessary to facilitate appropriate policies and interventions, however the fact that hospital environments are not generic makes achieving this complicated.

3.6 Conclusion and Recommendations

One of the most empirically tested areas of occupational psychology is the relationship between work and stress. Whilst there have been many quantitative studies that have examined the impact of the NHS psychosocial work environment(s) on nurses, doctors and other health care professionals, comparatively few studies have been conducted on physiotherapists and occupational therapists, and even fewer conducted using qualitative methods. This study was designed to bridge this gap by using in-depth qualitative interviews with physiotherapists and occupational therapists working in the NHS to develop an in-depth understanding of therapists' representations of their psychosocial working environments and of issues relating to stress experienced as a consequence of work. Indeed the study has been able to elicit rich descriptions from therapists of their psychosocial environments and experiences of stress as a consequence of their work within this context.

The findings from this study have context specific implications for physiotherapy and occupational therapy professions. Decisions regarding the usefulness of these findings in explaining other similar situations are to be left to the readers' discretion. This study has been able to show that rapid organisational change without adequate consultation has led to disenfranchisement amongst therapists. This has forced them to create profession specific allegiances rather than regarding themselves as integrated components of the NHS. Outcomes of the formation of a distinctive professional sub-culture have been positive within-profession social support alongside the formation of negative inter-professional relations.

Therapists are generally satisfied with the clinical component of their practise, yet their role is changing to being more managerial and administrative in focus. Personal and professional development opportunities would go some way to enabling the development of these

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roles and to enable the identification of satisfiers within the roles. In addition formalisation of a supervisory system is required; with the level of commitment, professional support and overall competence of clinical supervisors requiring positive action in order to facilitate professional development. Furthermore, those within the organisational structure of the NHS responsible for the policies and practises relating to the allied health professions need to be receptive to the reality that therapists are experiencing high levels of work-related stress as a consequence of organisational aspects of their working environment. They must additionally be sensitive to the fact that therapists will opt out of the NHS if job dissatisfaction and level of work-related stress are not addressed.

Analysis of emergent themes indicates that there are several key areas in which there could be improvements which would lead to a reduction in work-related stress and more effective retention in the future. These include:

- Parity in terms and conditions across organisations: something respondents do not believe is currently achieved through the agenda for change process.
- Better organisational (top-down) communication.
- Active involvement of therapists in developing and implementing modernisation policies.
- Strengthening supervision and personal development support.
- Improvements in access to resources and improvements in environmental working conditions.
- Improvements in supporting initiatives regarding improving work-life balance.

Review of work-place practice and policy to ensure optimum and effective psychosocial and organisational level improvements appears to be advisable if employing Trusts are to address therapists' concerns.

If attention is paid to the issues identified in the course of this study, trusts would be going some way to demonstrating a culture of valuing staff and would be improving their likelihood for best possible recruitment and retention.

3.7 Further Research

It is recognised that as a small exploratory study further research into the subject area is needed. This is needed to clarify if the concerns expressed by respondents in this study are duplicated by the majority of therapists in the trusts involved in this study.

Longitudinal research is advisable, in order to investigate the long term implications of the organisational re-structuring of the NHS on physiotherapists and occupational therapists perceptions and experience of work-related stress. Moreover there is a need to investigate the impact of stress management interventions designed to target the situational factors of work-related stress.