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An Organisational Approach to Stress and Burnout in Health Care Services

A portfolio of study and practice
submitted in fulfilment of the requirements of
Doctor of Clinical Psychology
(D.Clin.Psych)

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PREFACE

An Organisational Approach to Stress and Burnout in Health Care Services

Introduction

This thesis is the product of working with health and social care professionals over a period of twenty years and the belief that caring for staff means better care for service users. The author has a clinical management post in the NHS with responsibility for the Health Psychology Service. Part of this service involves offering an employee counselling service to staff and working with Occupational Health. She also has a responsibility for providing consultation and supervision to a number of health care workers. Whilst client care has been a frequently reported source of stress at work for these health professionals, so have problems with colleagues, managers, subordinates, team relationships and other agencies. Personal problems, such as relationship problems, financial difficulties and health worries may also be raised with the supervisor; the health worker being unable to distinguish one stressor from another.

In clinical and research practice, discerning one stressor from another is common practice. Human beings are drawn to construing their world by nature of their beliefs and ideas. We tend to categorise and compartmentalise observations to make sense of information and to predict outcome (Murray, 1997). Clinically, a cognitive-behavioural approach to stress management actively encourages the individual to 'break-down a global stressor' into its component parts. This is in order for the client

to view a problem in more manageable sections and to be able to select the right kind of coping strategy for a particular aspect of a problem (Folkman, Chesney, McKusick et al., 1991). From a research perspective, the most widely used methodology for studying stress is to construe it as a transaction between the person and the environment. A transactional model of stress and coping (Cox & Macay, 1981) conceptualises aspects of this transaction as the sources of stress, the cognitive and bio-chemical mediation of stress, the buffering effects of social support and the consequences of stress. What is sometimes overlooked, however, is how the researcher influences the observation process. Stress researchers often present their research as if it is objective and 'real', rather than a reflection of their belief system and the way they construct their study (Orme, 1960). Investigating 'sources of stress' for example presupposes that there is a one-way relationship between stressors and the individual, which then results in consequences or effects of stress. What is often missing is linking the effects of stress to its sources and studying the context in which stress is **mediated** rather than caused.

At an interpersonal level, what occurs in one relationship often affects another such that stress emanating from one relationship will impact on other relationships. An example would be having problems with a manager, which affects team relationships and a health worker's relationship with his partner and dependants. Likewise, having problems at home might mean that work relationships suffer. This ripple effect is part of the dynamic nature of any interpersonal system. Such is its complexity that it is hard to know what is a cause of stress or what is an effect. Very often the effects of stress are also the causes, creating a potential 'stress cycle' into which the individuals can find themselves locked.

The thesis

Aims: This thesis aims to apply psychological theory, research and practice to understanding the interpersonal context of occupational stress. This is with a view to developing stress research methodology, and interventions for optimising staff relationships, staff well being and organisational healthiness.

Section 1: The review The first section provides a critical review of stress and burnout in health care professionals. It begins with a discussion of the problems of defining stress and provides a historical perspective of stress research, measuring burnout in health care professionals and the importance of staff support as a stress buffer. It then focuses upon organisational sources of stress for health care workers, taking into consideration the current political and social agenda in the UK and changes in the National Health Service. The interpersonal context of stress at work is then considered in terms of the stressor and buffering effects of collegial relationships in health care teams. Little is known about stress and team dynamics, particularly in a health care setting, in contrast to the wealth of research available on client sources of stress and burnout. Likewise, little is known about managing stress at an organisational or team level in contrast to individualistic cognitive-behavioural or humanistic approaches to staff support. The conclusions drawn from this review lead onto section two and the proposed research project.

Section 2: The research study The research component is a cross-sectional survey study which investigates the interpersonal context of stress at work. It focuses on stressful and supportive relationships with significant others to include the client, the client's family, colleagues at work, managers and supervisors, and the partner, family

and friends of the health professional. The health care setting of choice is HIV care services; a developing field both in organisational terms as well as medical ones. For the HIV professionals who are involved in this area of health and social care, there is research evidence to suggest that they may be at increased risk of occupational stress and burnout. This is primarily thought to be because of the emotionally charged nature of working with people who have a potentially chronic, deteriorating, and fatal illness.

The natural history of HIV and AIDS is still unfolding and continually influences HIV service development, funding and delivery. HIV teams and health workers, as well as the service users and their families, are all affected by new developments in HIV care. As the medical and psychosocial aspects of HIV care change, so do the tasks and roles of individual workers. How HIV health care professionals negotiate and adapt to these organisational imperatives, however, is largely unknown. Central to this research project is studying the interpersonal context of stress at work and the impact this has on the psychological and physical well-being of the health worker (and the organisation). Other variables known to affect stress levels such as coping methods, past experience, and self-efficacy will also be investigated to consider other possible influences on health outcome. The results from this study are presented followed by a discussion and conclusions. New directions for organisational research and intervention in stress and burnout in HIV/AIDS care will be given, based on the findings of this study. This is to complement the predominately client-focused approach to studying the sources of stress in HIV care.

Section 3: The Case Study To complement the critical review and research components, the case study aims to provide a more in-depth analysis of one health

care worker, an NHS manager, over time. The manager selected for the case study was assessed for his management potential, at the same time as other members of his management team, as a preliminary to an organisational development programme. He was found to have high levels of occupational stress following psychometric assessment and an interview with the researcher-clinician. He identified interpersonal conflict in the management team as a primary source of stress and felt that his difficulties at work were compromising his health, mood and ambition to remain in his post.

The case study presents the management assessment, feedback and development plan for this manager. It is based on two Level B Occupational Psychometric Testing Instruments used for individual and management development planning in which the author sought training to complement her clinical interview skills and knowledge of a battery of stress and coping measures. Following a week long intensive Level B certificate course in Occupational Testing run by Oxford Psychologists Press, the author was qualified to use the Myers Briggs Type Indicator (Myers, 1962) and Californian Psychological Inventory (Gough, 1996) for Individual Development Planning. This case study demonstrates the application of these psychometric instruments, in conjunction with clinical assessment, to provide an organisational stress management intervention. By providing constructive feedback, development plan and report based on the assessment, it was possible to identify this manager's leadership style, key motivators, interpersonal style, problem solving and decision making styles. This case study provides a link between personality, team dynamics and stress and as such makes a small, but unique, contribution to the literature on the applications of the Myers Briggs Type Indicator.

SECTION 1

Stress and Burnout in Health Care Professionals: A Critical Review

1.0 Summary of aims and objectives

This review is a critical appraisal of the theory, research and clinical intervention approaches to stress and burnout in health care professionals. It has been undertaken in order to overcome some of the limitations of established methods of studying and managing stress at work for this group of workers. The primary aim is to revisit the stress and burnout literature and to examine the organisational and interpersonal context of stress in health care settings. The objectives include presenting a reformulation of stress and burnout in health care work and discussing the relevance of an organisational approach to research and stress prevention.

Stress and Burnout in Health Care Professionals: A Critical Review

1.1 Introduction

Stress arousal is a normal part of daily life and in moderation it can help an individual to be motivated to perform well and achieve. In extremes, however, stress can impair mental and physical functioning and health. Stress arousal has also been linked to an increase in health-risk behaviours such as tobacco and alcohol use (Jemmote & Locke, 1984; Plant et al., 1992; Conway et al., 1981).

1.1.1 The cost of workplace stress

At an organisational level, high levels of stress in the workforce are associated with decreased performance, decreased work-satisfaction, poor concentration, absences from work, increased sick-leave, an increase in accidents, increased turnover of staff and an increase in staff health problems (Creed, 1993; Sigman, 1992; Cooper & Cartwright, 1994; Quick & Quick, 1984; Locke, 1976; Michie, 1992; Burke & Richardson, 1996; Kahill, 1988; Levi, 1987). Workers who endure consistent and prolonged stress may suffer from 'burnout', become depressed or even suicidal (Maslach, 1978; Caplan, 1994; Ross & Seeger, 1988; McElroy, 1982; McCarthy, 1989).

The financial ramifications of lost working days and productivity to employers is enormous. In recent years in the U.K. it has been calculated that 360 million working days are lost each year to sickness, costing £8 billion (Cooper & Cartwright, 1994; Sigman, 1992). In a study of mental health workers, it was

observed that mental health problems alone caused thirty times as many lost working days than in industrial disputes. (Creed, 1993) More recently in the U.K., employers have been subject to litigation procedures for failure to protect workers from occupational stress with large compensation amounts and legal fees to pay (Cox, 1996). All the above factors will impact on client care as well as the employee, his family and the organisation. The cost of stress in the work place is high, not only financially, but quality of care and staff health are both compromised.

1.1.2 What is stress?

The definition of stress is contentious and tends to reflect the theoretical interests of the definer. Theorists who are interested in external stress focus on adverse environmental factors. For those interested in the internal stress response, biochemical and physiological changes and health implications are central. Many theorists accept both these aspects of stress and focus their research activities on understanding how external stressors become internalised and how individuals differ in their perception of and coping with various stressful events. The focus is on the transaction between the person and the environment (Cox & Mackay, 1981; Cox, Kuk & Leiter, 1993; Cohen & Lazarus, 1983; Lazarus & Folkman, 1984). Individual's thoughts and perceptions, past experiences and coping resources are pivotal in a transactional model of stress. Stress according to this model then is essentially cognitive; when perceived demands exceed perceived resources.

1.1.3 How and when does stress become burnout?

Burnout, is likewise, a debated topic and has been associated with work overload generally and working with the public specifically (Freudenberger, 1974; Cherniss, 1980; Maslach, 1978). There is also disagreement about whether burnout is a process or end stage to prolonged stress. It is unclear at what point stress becomes burnout and this largely depends on the stress theory being used.

Cherniss defines burnout as a transactional process between external work stressors, internal worker strain and mediating psychological mechanisms (Cherniss, 1980; 1990; 1992). In this respect it is similar to a transactional model of stress and occurs in stages as follows. The first stage is where work demands exceed personal resources. The second stage is characterised by an emotional and physiological response to this discrepancy resulting in anxiety, tension, fatigue and exhaustion. The third stage involves changes in attitude and behaviour including a detached stance towards clients and a more self-absorbed, self-gratifying approach to work. Burnout then could be construed as mental disengagement from external stressors at work. Where practical solutions cannot be found, a change in attitude and behaviour provides a method for coping with or adapting to prolonged stress (Burke et al., 1984; Burke & Greenglass, 1991).

1.1.4 A historical perspective of stress research

In 1956, Hans Selye presented a physiological model of stress; the General Adaptation Syndrome. This is a three-stage model, characterised by an initial 'alarm

stage', a 'resistance stage' and finally an 'exhaustion stage'. The alarm stage relates to arousal of the sympathetic nervous system and the fight-flight response. The resistance phase relates to physiological coping and the exhaustion phase is marked by depletion of hormones and neurotransmitters, compromising the immune system and yielding the individual susceptible to illness (Seyle, 1956). This work was rudimentary compared with the more recent and rapidly growing area of psychoneuroimmunology. An internal model of stress can explain individual differences in terms of genetic vulnerability. The main limitation, however, is that it does not include consideration of external stressors or individual interpretation of events. The person is viewed in terms of his internal workings rather than as a social being in interaction with its environment. In this model, it is nature rather than nurture, which guides our experience of stress.

During the 1960s there was a move toward studying external stressors and stressful life events. In a study by Holmes and Rahe (1967), stressful life events were elicited and rated for their stressful impact as if they were universal stressors. They ranged from very stressful events such as death of a spouse, divorce, injury or illness, and pregnancy to mild stressors such as change in family get togethers and holidays. Some of the items, however, are culturally biased stressors such as 'Christmas' and others historically bound, for example 'having a mortgage over £5000'. Another problem with the Social Readjustment Scale was that it assumed different life events affect people in the same way. Pregnancy, for example, is moderately stressful for all according to this scale. It cannot, however, differentiate between a welcomed pregnancy or near disaster. Positive stressors may be beneficial to mood and health and are not qualitatively the same as negative stressors (Seliger, 1986). Daily hassles and uplifts, will also impact on the individual. They may be slowly erosive

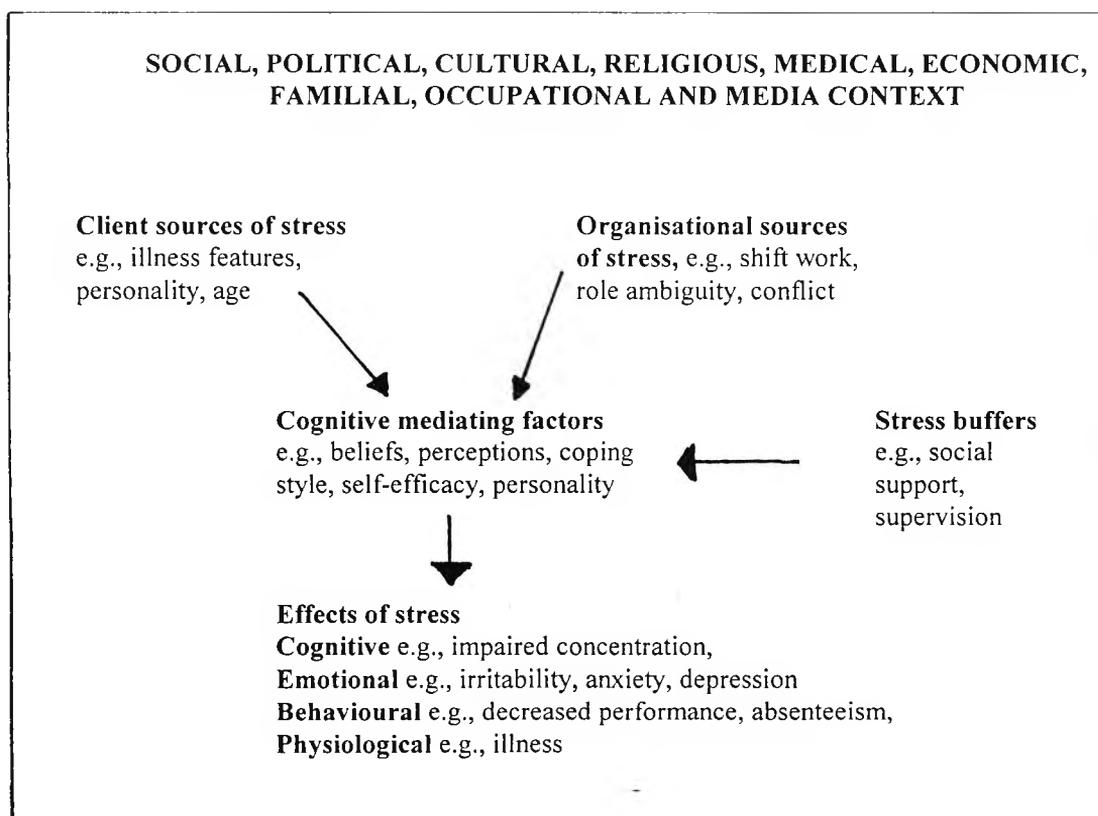
rather than a major crisis but never the less take their toll on the person (Kanner et al., 1981). An external model of stress is limited in that it assumes we will all be affected similarly by the same stressor, when in fact research evidence indicates this is not so. An external model of stress cannot account for individual difference and relies on nurture to explain the stress response without adequate consideration of the unique ability of humans to think and react to ideas and beliefs rather than actual events in the physical world. Phobias are a good example of where thoughts alone about a feared object can stimulate the sympathetic nervous system and prepare the body to fight or flee in the absence of a physical object. At a physiological level it is difficult to differentiate between fear, anxiety and stress. They all involve the 'fight-flight' response and it is largely the individual's appraisal and attributions, or spectator opinion, which categorises and labels the type of arousal. This recognition led to a move towards a cognitive-behavioural interpretation and transactional model of stress.

By the 1970s, and in keeping with other cognitive-behavioural models of human behaviour, there was a move toward understanding why individuals react differently to the same external stimuli and the importance of individual cognitions and coping resources. The importance of the individual's thoughts, beliefs and coping resources as a key mediator in the stress response became prominent. A transactional model of stress is currently still the most popular conceptualisation of stress (Cox & Mackay, 1981; Cox, Kuk & Leiter, 1993; Cohen & Lazarus, 1983; Lazarus & Folkman, 1984). This model is individualistic and focuses on the cognitive transaction between the person and his/her environment. It is widely used to inform stress research and stress management approaches.

1.1.5 A Transactional Model of Stress

A Transactional Model of Occupational Stress (Cox & Mackay, 1981) considers how the external stressors become internalised physiologically and the impact this has on health and behaviour (see figure 1.1.5). The mediating mechanisms of interest in this model are the individual's i) perceptions of stress and ii) access to coping resources and iii) stress buffering effects of social support.

Figure 1.1.5 A Transactional Model of Occupational Stress



It could be predicted from a transactional model of stress that the way in which individuals experience stress is dependent on the sources of stress, their perceptions and past experiences, as well as the coping resources and social support available to them. Some stressors are still viewed as being largely culturally universal, such as the death of a loved one. Other stressors however are seen as much more open to interpretation depending upon the individual's viewpoint, personality and past experiences. For example, increased demands at work may be viewed as challenging and exciting by some, or may be viewed as unreasonable and impossible by others.

The limitation of a transactional model of stress is that it is individualistic and static. It does not readily account for the social context of stress or the dynamic nature of human groups. Stress is conceptualised as occurring within, rather than between, individuals. What is interesting is that on closer inspection of the Social Readjustment Scale, ten out of the top fifteen stressful life events occur in families. The cause-effect analysis of a transactional model may have obscured the relevance of the interpersonal context of stress. Perhaps stress is a marker of dynamic interpersonal relationships rather than simply a matter of perceived demands exceeding perceived resources.

1.1.6 The buffering effects of social support

Several studies investigating occupational stress have identified social support as a key modifier of perceived stress and psychological strain (Leiter & Maslach, 1988; Dignam & West, 1988; Leiter, 1990, 1991; Constable & Russel, 1986; Cottington & House, 1987). Social support may in addition, buffer the individual from health

problems. The buffering hypothesis model of social support suggests that social support will protect an individual under high stress conditions, but will have little effect on individuals under low stress conditions. In this model, social support does not so much improve stress levels or health, but rather buffers the individual from the effects of high levels of stress. The way in which others act as a stress buffer is believed to be related to their role in changing the individual's appraisal of a stressor. They may offer practical support, emotional support, or challenge the individual's cognitions. There is also some evidence to support the view that social support may have a direct effect on stress by giving the individual a sense of belonging and increased self-esteem (Cohen & Wills, 1985).

The value of social support is well documented in the literature, but the interpretations of why it is beneficial are largely cause-effect in nature (Cobb, 1976; Schaefer et al., 1981; House, 1981; Wills, 1984; Leiter & Maslach, 1988; Burke et al., 1984; Dignam & West, 1988; Leiter, 1991). As above, it is what others do to the person in practical, emotional or cognitive terms which is central to our current knowledge about social support. Prevailing cause-effect methods of study no doubt encourage this view of social support but it is a limited construction. It is difficult to study dynamic relationships because a survey or even a longitudinal study is but snap shots of a dynamic and evolving process. This process is nevertheless central to understanding how stress is mediated within an interpersonal context. Perhaps if more attention were paid to understanding the interpersonal context of stress more generally, how stress increases and decreases as part of a dynamic system, we would be in a better position to conjecture how relationships with others can be both stressful and supportive, rather than **either** stressful **or** supportive as is so often assumed in studies. Relationships change over time and across situations.

Sometimes a person's greatest confidant and support can overnight become their greatest source of heartache and distress.

Within the section on organisational sources of stress, it will become apparent that occupational stress and burnout is buffered by good interpersonal relationships at work with managers and peers. Likewise, occupational stress and burnout increases when these relationships are perceived more negatively (House, 1981; Leiter, 1991; Leiter & Maslach, 1988). What we do not know however, is how these observations are related to each other. That is, how stress manifests as part of work-team interaction rather than as a cause-effect encounter with another (single) human being.

1.2 Burnout in health professionals

In human service workers, burnout is commonly viewed as the outcome of exposure to the stresses of caring for others and the emotionally draining nature of working in the social or caring professions such as teaching, health services, and police work. Burnout has been conceptualised by Maslach and her colleagues, who are pioneers of burnout research in health professionals, as a 'syndrome' of emotional exhaustion, distancing from clients and emotional hardening (depersonalisation) and decreased personal accomplishment at work (Maslach, 1978; Jackson et al., 1986). Emotional exhaustion is a feeling state of being overstretched or taxed by the demands of human services. Depersonalisation refers to an attitude of uncaring or callousness towards recipients. Reduced personal accomplishment is the sense of decline in competence or achievement in working with the public.

Pervasive in the 'caring professions' is frequent encounters with emotionally charged and stressful situations. This chronic exposure may take its toll on the service worker, particularly if the employee is not adequately trained and supported to deal with these situations (Bailey, 1980; Ullrich & Fitzgerald, 1990; Gray-Toft & Anderson, 1980, 1981; Birch, 1975; Paxton & Axelby, 1994). Burnout for health professionals evolves over time and as a consequence of chronic exposure to the emotionally challenging nature of working with people who are ill or dying, who are suffering physically or mentally and who may express distress, tears, sadness, despair and anger (Maslach 1978; Jackson et al., 1986; McElroy, 1982; McCarthy 1989; Schaufeli et al., 1993; Bennett et al., 1995; Miller, 1995a).

Leiter and Maslach (1988) have presented a developmental model of burnout predicting that emotional exhaustion precedes depersonalisation and reduced personal accomplishment. Burnout could be construed as a disengagement from stressors associated with working in human services. This process could be a coping mechanism or defence on the part of the worker, to reduce the impact of exposure to stressful encounters with clients. There is some empirical evidence to support this model. Shifts in preferences in decision making style have been observed for people under stress. Individuals who have a preference for making decisions in a more humanistic and subjective way, may develop a more detached and objective style (Quenk, 1998).

1.2.1 Are some health workers more vulnerable to burnout?

Some individuals may be less vulnerable to the effects of stress because of personality factors. People who have a more 'hardy personality' are thought to be

better able to deal with stressors and are less likely to become anxious, and aroused in adverse circumstances. Specific personality characteristics of the hardy personality which protect the individual from stress and stress-related health problems are their positive sense of control, commitment and challenge (Kobasa, 1979). These people embrace change and difficult situations with a positive and determined outlook and sense of being personally able to influence events. According to this theory, the less hardy the person is, the more vulnerable to stress and burnout s/he is. Personality theories of stress may be useful but should be treated with caution because it is easy to 'blame' the worker, rather than look for other external aspects of stress. This is particularly relevant when managers or employers tend to dismiss their contribution to creating a stressful work environment, in favour of identifying the stressed employee as a 'weak person'.

In health care, research has examined personality characteristics linked to stress and burnout. Some health professionals may be particularly vulnerable to stress and burnout, having migrated into this work because of personality attributes or personal agendas and histories (McCranie & Brandsma, 1988; Keinan & Melamed, 1987; Farber, 1983; Kirchmeyer, 1988). Burnout is more likely in empathic, sensitive and dedicated workers, but also for those who are over enthusiastic, idealistic and prone to over identification with clients (Cherniss, 1980; Farber, 1983; Freudenberger & Richelson, 1980).

In a sample of HIV professionals, for example, it was found that stress and burnout may be linked to age and worker identification with a young client group (Ross & Seeger, 1988). Catalan and colleagues found that heterosexual health workers were more likely than gay health workers to experience burnout working with an HIV

infected population (Catalan et al., 1995). They suggest that worker identification with clients' sexuality may have a buffering effect against work stress, increasing work satisfaction and achievement and ability to relate to the client.

In a study investigating personality types of college students, it was found that people who have preferences for introversion, sensing and thinking, were more likely to experience stress related problems than those who showed preferences for extroversion, feeling and intuition (Cooley & Keesey, 1981). Caution in the interpretation of the data is required, however, because in another study of college students, it was found that under stress, the students tended to shift toward introverted, sensing and thinking preferences. It may be that Cooley and Keesey's study did not reflect true personality type, but rather personality type under stressful conditions (Ware, Rytting & Jenkins, 1994).

There has been a tendency in personality and burnout research to focus on health worker characteristics, rather than the interaction of personality 'traits' and 'types' of the health professional and his/her clients, colleagues, subordinates and managers. Personality and health care team dynamics is a little known topic as a context for stress in health care teams (Hammer, 1996, Salt, 1997).

1.2.2 Measuring stress and burnout in health care workers

Maslach and Jackson (1986) have developed a widely used psychometric instrument for measuring burnout in human service workers. There is published validity, reliability and normative data. The Maslach Burnout Inventory (MBI) has a focused application, consistent with the theory upon which is based, which is to measure the

effects of stress and burnout emanating from the client-worker relationship. The 22-item questionnaire is brief to administer and yields three sub-scale measures of emotional exhaustion, depersonalisation and personal accomplishment. There are cut-off scores to infer low, moderate or high levels of burnout across these three dimensions. It might seem the most obvious tool to use when studying stress and burnout in health care workers, however, closer inspection of the items reveals that it has a very focused use.

1.2.3 Limitations of the MBI and a client-focused view of burnout

There are a number of limitations of the MBI. Firstly a Maslachian interpretation of burnout confines the researcher and interventionist to a single source of stress, the client, rather than a broader view of stressors associated with health care work. It also conceptualises the client as an external stressor without broader consideration of the mediating variables to include health workers' cognitive appraisal, coping resources, personality factors, organisational sources of stress and social support; all of which feature in the stress and burnout literature more generally. Thirdly the health work is viewed in isolation rather than as part of a dynamic health care team. Researchers interested in measuring the effects of stress and burnout emanating from other organisational factors and interpersonal relationships would be well advised to seek out additional measures, for example the Occupational Stress Indicator (Cooper, Sloan & Williams, 1988). The MBI has a limited application given the potential range of stressors, which could affect health professionals. This is expanded upon in the next section on organisational sources of stress.

1.3 Organisational sources of stress in health care work

Organisational sources of stress are important factors to consider in the mediation of occupational stress. Cary Cooper (1983) has identified six major sources of stress in the workplace generally. They are:

Sources of occupational stress (Cooper, 1983)

1. Job specific stresses such as physical risk to staff from chemicals, machinery, or infection
2. Role within the organisation including role ambiguity and conflict
3. Career structures and processes such as opportunity for promotion and tenure.
4. Interpersonal work-based relationships across all levels.
5. Organisational structures such as hierarchy, line management, adaptation to change and involvement in decision making.
6. The effects of work pressures on family life.

Most jobs have an element of health risk factors, role ambiguity, inter-relationship problems, career limitations and impinge on family life etc. Are there specific and unique factors associated with working in a health care setting? Applying Cooper's six sources of occupational stress to the health care field uncovers a unique profile of stressors, many of which are linked to interpersonal relationships at work in the broadest sense and not only the client-carer relationship.

1.3.1 Job specific stressors

Health care involves dealing with emotive issues on a daily basis, including death, suffering, socially stigmatised issues, pain, loss, grief, disfigurement and other forms of human suffering (Jones, 1981; McCarthy, 1989; Paxton & Axelby, 1994; Firth-Cozens, 1987; Ulrich & Fitzgerald, 1990; Bor & Miller, 1988). Bereavements, for example, involve intense and often difficult working circumstances increasing the emotional demands placed upon the health worker. Sequential and multiple bereavements might be particularly erosive over time for workers involved in caring for the terminally ill (Sherr et al., 1992). Some health professionals may also be more prone to burnout because of large case-loads or time spent in direct clinical work. Percentage time spent with clients may be an important factor in stress and burnout (McKusick & Horstman, 1986). The emotionally draining nature of working with service users is the 'job specific stressor' which is central to a Maslach interpretation of burnout.

Client contacts are increasingly becoming the benchmark for job and service survival (Halton, 1995). In high client contact health care settings, workers may be over-stretched and feel dissatisfied with the quality of care they can give. In contrast, in some rural areas particularly in developing countries, some health care professionals may be at risk of burnout because of worker-isolation and lack of social and managerial/supervisory support.

Another job specific stressor in health care may include fear of contagion, especially from infectious diseases. Although the risk of occupational infection (e.g., with Tuberculosis, MRSA, HIV) is low with adequate precautions, health care

professionals nevertheless may be disproportionately anxious about potential contamination, particularly from invasive procedures (Elford & Cockcroft, 1991; Krasnik et al., 1990). Education and experience has a role to play in modifying these health beliefs, but anxieties and prejudice may still persist for a minority (Eakin & Taylor, 1990; Klimes et al, 1989).

1.3.2 Impact on family life

Interpersonal relationships generally are important in the mediation of stress and include relationships with partner, friends and family as well as work place relationships. The pressures that health care related employment may have on the worker's family life include work load pressures and the emotional strain of this work (Miller & Gillies, 1996a). The workers' own family may increase worker stress if they hold negative attitudes about the client group or nature of the work (Klonoff & Ewers, 1990) or are unsupportive for other reasons. Interpretation of confidentiality parameters may also mean that the health professional feels that he or she cannot discuss aspects of client work at home, and therefore misses out a vital aspect of social support as a buffer against stress and burnout (Leiter, 1990, 1991; Dignam & West, 1988; Salt, Callow & Bor, 1992).

1.3.3 Organisational structures

In recent years in the U.K. National Health Service, the development of the purchaser/provider environment and re-organisation of departments and staff has involved considerable organisational change (Halton, 1995; Paxton & Axleby, 1994). This may all be about to change again within a new government. Other social

services and voluntary sector health agencies have also undergone changes, developments and cost improvement initiatives. These changes have generated a potential source of stress for employees as they adapt and develop new identities, roles and tasks at work and deal with loss of colleagues, teams, career plans and in some cases, their jobs (Warr & Jackson, 1985). Organisational change is a well-known antecedent of occupational stress (Cooper, 1983). The blurring of roles and tasks and need to compete for funds in some health care agencies means that there is potential for internal confusion, conflict and work stress.

Involvement in the process of decision making about health services may be an important buffer against stress and burnout, by increasing workers' sense of control (Matheny & Cupp, 1983; Wortman, 1975). Lack of control, however, and effortful control have both been shown to be detrimental to the health of animals (Weis, 1971) and to contribute to burnout in humans (Jackson et al., 1986; Landsbergis, 1988).

1.3.4 Role ambiguity and conflict

The psychological, medical and social implications of health problems necessitates multidisciplinary and multi-agency collaboration. Health care teams often rely on collaboration and co-ordination and do not always have clear leadership structures, or shared understanding of roles and remit, especially among mixed profession teams. Lack of clarity can result in ambiguity, confusion and conflict (Schwab et al., 1986; Farber, 1983). Access to clients may also be an issue between professionals. Confidentiality practices may restrict collegial access to clients, provoking 'secrets', conflict and territoriality between professionals (Bor et al., 1998). Limited numbers

of clients, or too many professionals involved, may result in professional rivalry (Barbour, 1995).

1.3.5 Career structures

There is an increasing tendency to offer limited and limiting posts in health care, related to financial constraints and current management practices. Posts may be time-limited (short-term contract), cost-limited (vulnerable to reduced funding and cost improvement initiatives), or career-limited (have limited career progression and development opportunities). Some health professionals may be vulnerable to stress because their post lacks security, planning, decision making, development opportunities, career enhancement, personal development, achievement and satisfaction (Cooper, 1983). This may result in decreased morale, boredom and burnout (Pines et al., 1981; Drexler et al., 1994). Some posts have also been developed, particularly new posts such as health counsellors, without adequate consideration of long term funding and development, or how these posts might become linked to mainstream services. Some health workers also find themselves in managerial positions without concomitant training and experience in these executive tasks. Not only could it be stressful for these workers, but subordinates might suffer as a result of poor or inadequate management and supervision (House, 1981).

1.3.6 Interpersonal relationships at work

Poor management, supervision and collegial relationships may contribute to stress and burnout. Good work-based relationships may buffer the individual against stress (House, 1981; Leiter, 1991; Leiter & Maslach, 1988). Many of the sources of

stress discussed above will impact on interpersonal relationships at work. Similarities and differences between health professionals and services are not always seen in terms of complementarity (Campbell, et al., 1994). Similarities may be viewed as duplication, 'treading on toes', competition and redundancy. Differences may be viewed as autonomy, segregation, territoriality, conflict and blame. Workers engage in 'fight or flight' communications and responses (Stockton, 1996). This is the first stage of the stress response proposed by Seyle (1956). Others may become despondent, bored or lack motivation and commitment and become depressed or withdrawn. Isolation of individual workers and poor relationships with colleagues may reduce the buffering effect of team support (Leiter, 1991).

The occupational sources of stress described by Cooper (1983) suggest that a broader approach to understanding stress in health care settings is necessary. Many of the sources of stress described involve interpersonal relationships at work with clients and health care teams and the organisation. Perhaps we should review our somewhat narrow and individualist view of health worker burnout and reformulate it in terms of team relationships (Drexler et al., 1994). This would involve extending the stress and burnout research to the study of health care team dynamics and the development of interpersonal measures of stress. In addition, stress management in health care teams and organisations would need to be developed and evaluated (Golembiewski et al., 1987).

1.4 Reformulating stress and burnout in HIV care

The main source of stress in health care work, which receives most attention in the literature, is client factors. The main source of support investigated is social support.

The impact collegial relationships and team dynamics have in mediating stress is largely implicit. Maslach who has been a major influence in guiding burnout research defines burnout as being exclusive to working in human services and client sources of stress (Maslach 1978; Jackson et al., 1986). But as has been described, there are numerous other stressful circumstances involved in health care work that are not directly related to the client relationship. Can the individual discern and compartmentalise sources of stress? And what about the dynamic and reciprocal nature of interpersonal relationships? Client relationships can be stressful, but also rewarding and some researchers are beginning to look at the buffering effect of satisfying work (Benett, Ross & Sunderland, 1996). Likewise, collegial relationships can be stressful as well as a source of support and again there is a growing body of research identifying stressful work relationship factors (Leiter, 1988; 1991). It may be that the degree to which an individual feels supported or stressed by another at work (client or colleague), is dependent upon the most salient aspects of that relationship at the time of study. Although client and collegial interpersonal relationships at work have been conceptualised separately for research purposes, in the real world they are interrelated. Developing a methodology to reflect this dynamic interpersonal work environment is important in future research initiatives.

Similarly we need to reconsider our approach to occupational stress management. It may be necessary to broaden cognitive-behavioural methods of stress management for health care workers to include organisational and team development interventions. It may be more appropriate to modify the context in which stress evolves, rather than try and modify the health care professional. The effectiveness of organisational interventions for stress management would need to be evaluated and

compared with clinical methods. Research investigating this in the corporate sector suggests that organisational interventions may be more effective than clinical interventions (Burke & Richardson, 1996; Cooper & Cartwright, 1994; Ganster et al., 1982; Shinn et al., 1984; Murphy, 1988; Golembiewski et al., 1987; Ivancevich & Matteson, 1987). There is a confound in this research, however, in that some researchers regard clinical stress management training in groups, or staff support groups, for example, to be organisational interventions. Although these interventions are applied in groups in the work place, they are essentially clinical and individualistic. That is they aim to promote the coping skills and social support of those individuals who attend. Other researchers view organisational intervention to mean intervening at an organisational structural or process level. This would involve the use of organisational development programmes such as consultancy, management development and team building. These methods aim to reduce the organisational sources of stress and to promote team and organisation healthiness. This may be achieved, for example, by improving team communication and inter-agency relationships. Clinical and organisational approaches for managing stress at work may be both appropriate, especially for different problems. They are however, distinct methods; both in their theoretical origins and application. Further research is required to evaluate their utility in health care settings.

1.4.1 Why do we focus on client sources of stress?

Health care staff frequently self-report to colleagues, supervisors and researchers that interpersonal and team issues are a major source of stress and tension; more so than direct client work for some. In a survey of 110 nurses, Leiter found that only 12% identified clients as the cause of stress compared to the remaining 78% who

identified colleagues, other professionals and administrators as a source of stress (Leiter, 1991). A sample of Scottish HIV health workers (n=139) were asked what they thought were the most demanding aspects of HIV work (Barbour, 1995). Almost a quarter of the sample identified multidisciplinary and interagency relationships as the most demanding aspect. Why has so much attention been given in the literature to client sources of stress when studies indicate that collegial relationships are also a major source of stress for human service workers? Do we lack objectivity about our 'work-place family' and focus on client issues instead? The answer is probably, yes. The employee may be aware of the expression of stress in teams without necessarily understanding the higher-order structures and dynamics involved (Campbell et al., 1994). Understanding team dynamics is complex and potentially threatening. Our training does not usually extend to organisational analysis, but rather focuses on the client-practitioner relationship and client pathology (Davis & Fallowfield, 1994).

The appeal of a transactional model of stress or 'narrative' (Murray, 1997) in stress research has greatly influenced the research agenda. Stress researchers aim to understand, define and predict the causes and effects of stress, mediating mechanisms and stress buffers as if they occur in a sequential process. A cause-effect analysis however, only represents half the story. The feedback mechanisms and how the effects of stress compound its causes are largely overlooked. Furthermore the human services worker is commonly viewed individualistically, rather than as part of a group or dynamic system (Campbell et al, 1994). Subsequently, relationships at work are viewed either as a source of stress, or as a buffer against stress but not as a medium in which stress thrives or can be contained,

depending on the 'healthiness' of the organisation and team functioning (Cox, Kuk & Leiter, 1993; Cox, 1996; Stockton, 1996; Drexler et al., 1994).

1.4.2 Staff support and stress prevention: Should we treat the organisation or the individual?

Miller and Gillies (1996b) have observed that it is common practice to impose staff support schemes without really taking onboard what staff feel they want and would use. These authors conducted a survey study of 203 oncology and HIV health care workers. They concluded that staff expressed a preference for individual, out-of-house support. The commonly cited obstacle to accessing support was lack of trust in colleagues about how they would use the information, and feelings of vulnerability about being viewed as unprofessional or unsuitable for their job.

However, what staff *say* they want and what they *need* may be two different things. Staff may not be objective observers of the processes which influence them in the workplace and may be unaware of how team and organisational factors may influence their thoughts and behaviours. One also has to consider how employees influence the organisation, rather than simply focus on what the organisation has done to the employee. Offering a one-to-one intervention may improve staff disclosure (by avoiding collegial trust issues) and allow individuals to attend, particularly when it is not practicable for an entire team to do so at one time. Some staff, however, may feel singled out if they attend on an individual basis whilst others may choose to opt out, irrespective of their apparent need (rather than desire) for stress management. Often it is those who most need it who feel it is unnecessary or unacceptable. Individual support initiatives may also be more costly (time and

money) and maintain, rather than change team relationships, management practices and interpersonal sources of stress. Employee-focused intervention may be particularly attractive to management to preserve a 'it's them not us' view, but it does not necessarily provide optimum effectiveness. Organisational interventions address the employee-employer 'fit', and may include organisation, team and management development as well as employee assistance initiatives as part of a balanced package.

1.4.3 The relevance of an organisational approach to stress management for health professionals

Miller and Gillies' (1996b) findings may reflect a preference for individual, out-of-house health worker support because this is a defence against addressing interpersonal and team dynamics. It may be that the health professionals prefer outsider support to *avoid* direct communications with peers, managers and subordinates and disrupting the status quo.

Employee assistance and counselling initiatives may support and increase individual coping skills (Megranahan, 1989; Glicker, 1983) but they do not necessarily reduce the organisational sources of stress. Likewise, individual and group support initiatives may provide a forum for listening to 'blame and worry stories' rather than effect change within the organisation (Stockton, 1996).

There is research-based evidence to suggest that organisational stress-management interventions are more effective than individual programmes (Cooper & Cartwright, 1994; Ganster et al., 1982; Shinn et al., 1984; Murphy, 1988; Golembiewski et al.,

1987; Ivancevich & Matteson, 1987). The reasons for this, however, remain to be explored. One hypothesis is that organisational interventions may be more effective because they enhance the stress buffering effects of positive collegial relationships. Another possibility is that they directly reduce interpersonal sources of stress. Future research needs to be directed at understanding the mechanisms of organisational interventions.

1.5 Conclusions and future directions

From this literature review, it is evident that there is a preponderance of research articles on client sources of stress and collegial sources of support and much less on client sources of reward and collegial sources of stress. The dynamic nature of interpersonal relationships at work is obscured by the tendency to focus upon client contact as the primary source of stress in health care work. A broader picture would include consideration of collegial relationships, team dynamics and organisational functioning. Research, which does examine work-based relationships, indicates that good collegial, management and supervisory relationships buffer individuals against work stress and burnout and that poor collegial relationships, management and supervision contribute to worker stress and burnout. Greater understanding of the stress-inducing and stress-reducing role workplace relationships play in moderating occupational stress and burnout is needed. This may open new avenues for research and stress prevention initiatives and compensate for the predominately individualistic and cause-effect view of stress and burnout in health workers to date.

The biological, psychological and social nature of health problems demands an integrated and multidisciplinary approach to caring for clients affected by illness.

Health workers are required to define their role and relationships within the wider care team and to liaise and share information to optimise client care. Rarely do health professionals truly work alone. Within multidisciplinary health care teams there is ample scope for role ambiguity and conflict, territoriality, poor communication, misunderstandings, lack of trust, withholding of information and lack of co-ordinated and integrated care. Increasing our understanding of the organisational and team context of stress may be a stepping stone towards promoting healthy team functioning and good client care. All too often there is a tendency to pathologise the individual worker or the client rather than attend to the organisational and team context (Leiter, 1991; Roth, 1995). Collegial relationships, power issues, team functioning, team development and communication are important areas in the future for organisational stress management, research and prevention in health care services (Roth, 1995).

Organisational and team interventions may be more powerful, than one-to-one employee support, because they can mediate organisational healthiness. This may lead to increased team cohesion, reduce worker isolation, enhance communication and sharing of information, improve comprehensive and co-ordinated client care and reduce stress and burnout in health care workers. Individual employee assistance initiatives may serve to 'prop up' individual workers rather than effect organisational change. Organisational development (in the broadest sense) may be more cost-effective than individual counselling or support group interventions because organisational problems need organisational solutions and not simply clinical ones (Reynolds & Brinner, 1994). The evidence for this, however, remains to be demonstrated.

Researchers and stress consultants need to move on and strengthen their existing knowledge and practice in the management of stress and burnout. They need to pay more attention to the health care setting generally and the health care team in particular in defining the parameters of stress and burnout for health professionals. This may lead to a cautious reconsideration of the previously tried and tested methods. It is paradoxical that we identify the client as the significant source of stress in health care work, and then 'treat' the worker. Is this not treating the symptom rather than context in which it arises? A more congruent approach would be to treat the health care team; the interpersonal context in which clients and colleagues operate and stress is mediated. But did we not know that already? Even, if at the 'end of the day' this review has done little more than reinvent a very old wheel, it may help us to look at the wheel in context and to consider more congruent and dynamic, interpersonal approaches to managing stress in health care teams. Their effectiveness remains to be demonstrated and placed on the research agenda.

SECTION 2

A Team Approach to Occupational Stress and Burnout in HIV Services

2.0 Abstract

The relationships between interpersonal sources of stress, support and health outcome for four HIV care teams were studied using a questionnaire survey design. Additional qualitative information was obtained from individual interview with participants and a team discussion day. There were limitations, however, to the interpretation of the data obtained in this study. This was because of the constraints of cross-sectional survey design as well as the relatively small numbers of participants for some analyses.

Overall, the results obtained in this study suggested that collegial relationships are important mediators of stress at work. Multidisciplinary team sources of stress in particular were found to be related to increased GHQ-12 caseness. Manager and same profession colleague support were found to be related to reduced perceptions of stress from manager, same profession colleagues and multidisciplinary team sources of stress; but not from client and client's family sources of stress. Personality differences appeared to contribute to conflict and stress in same profession teams. Differences in professional orientation, lack of leadership structure, power imbalance, task and role ambiguity, and competition for resources and clients appeared to be central to conflict and stress in multidisciplinary teams. Multidisciplinary team and manager sources of stress were higher for participants

who had been in HIV care services for more than 6 years. HIV professionals who had been in the HIV speciality for longer also rated the multidisciplinary team as less supportive. Length of time in service was also associated with decreased self-efficacy, age being taken into account. It was concluded that changes in HIV service structure, resources, client contact and collegial relationships in recent years, related to improved effects of combination anti-retroviral drug therapies for service users, might have been particularly stressful for the HIV staff in this study.

A Team Approach to Occupational Stress and Burnout in HIV Services

2.1 Introduction

This section builds upon the reformulated definition of stress and burnout presented in section 1 and the view that stress is organisationally mediated. The definitions of stress, burnout and historical review, which were presented, in section 1 (p.8-11) will not be reiterated here. Rather, this section focuses exclusively on one particular group of health workers; those involved in the care of people affected by HIV and AIDS. This is with the aim of developing a study to explore the relevance of organisational sources of stress in HIV care teams and the potential need for organisational interventions to reduce occupational stress.

At the outset of this section, a transactional model of occupational stress (Cox & Mackay, 1981; Cooper, 1983) is applied to explore the demands upon and coping resources of HIV professionals working in the U.K. This is followed by developing a more systemic or contextual view of stress mediation in HIV care teams. HIV professionals around the world have become a focus for stress research and intervention in recent years (Schaufeli, Maslach & Marek, 1993; Bennett, Miller & Ross, 1995; AIDS Care special edition, 1996). This is because it is becoming widely recognised that working intensely and over long periods of time with people with chronic, disabling and potentially fatal illness can be emotionally draining for the health professional. The HIV worker may also become emotionally hardened to clients (depersonalisation) and lack a sense of personal accomplishment (Maslach & Jackson, 1986). What is it about working in HIV services which may especially lead to stress and burnout? Is it the emotionally challenging nature of HIV disease itself,

which affects workers, or are there other unique stressors within HIV organisations, which still require investigation and articulation? Developing the research agenda and interventions to prevent occupational stress in HIV care remains a priority because staff health and client care may otherwise both be compromised. The primary aim of this study is to develop an understanding of the organisational context of stress at work for HIV professionals. The measurement of stress and burnout in HIV professionals and the benefits and limitations of a transactional model of stress and burnout in HIV care is evaluated before developing a broader view of stress in HIV teams. HIV team dynamics will be a main focus of the study with a view to suggesting team and organisational methods for reducing occupational stress in HIV services. A summary rationale for the proposed study is then given followed by the study.

2.2 Occupational stress among HIV professionals

A Transactional Model of Occupational Stress (Cox & Mackay, 1981) was outlined in section 1 (p.12) to describe how environmental stressors are perceived and coped with at an individual, cognitive level. The amount an individual feels 'stressed' is believed to be dependent upon the interaction of external demands or stressors and the way in which the individual perceives and copes with them. When the demands of work are matched or balanced with the resources of the individual, performance may be optimised. Stress arousal can be a positive, energising experience. When the demands are excessive, or personal resources are insufficient, however, there will be an imbalance. The demands of work will outweigh the resources of the individual and negative stress will result (Cox, 1981). This may impact negatively on the worker, his colleagues, peers and subordinates, the clients, team performance and

organisational effectiveness. Stress and its consequences can ripple through the organisation at the cost of staff health and morale, quality client care and financial losses (see p.7). The mediating mechanisms which are central to a transactional model of stress and which will be taken account of in this study include, perceived demands (stressor appraisal) and perceived resources (coping) and the balance or fit between them (coping effectiveness). Firstly, consideration will be given to the demands of HIV care work.

2.2.1 The demands of HIV care work

In accordance with a transactional model of stress (Cox & Mackay, 1981) the amount of stress involved in HIV care work is open to individual interpretation; depending upon the individual's viewpoint, personality and past experiences. The attributions that the individual makes, are also important in determining how he responds to the perceived stressor. To some workers, for example, increased demands at work may be viewed as challenging and exciting, to others, however, they may be viewed as unreasonable and impossible. This interpretation will undoubtedly influence the individual's response to the stressor.

Some stressors are culturally sanctioned as 'universal stressors' such as the death of a parent or divorce (Holmes and Rahe, 1967). Likewise, some occupational demands may be generally regarded as stressful for most employees such as poor management, unobtainable targets, redundancy and task and role ambiguity. In a study by Birch, 66% of nurses who had voluntarily left the profession indicated that it was due to the stress of nursing work Birch (1975). This high response may be due to individual differences and chance, but more likely there could be some kind

of universal environmental stressor affecting many nurses, such as high demands from patients and managers and/or insufficient staff, lack of resources and low pay. Inadequate training or lack of staff support may also reduce the stress buffering effects of social support. Consistent with a transactional model of stress, there may be a discrepancy between the high demands made upon the nurses and the low emotional and practical coping resources available to them. This imbalance would be perceived as 'stress'. In HIV services, the 'universal stressor' or demand which is assumed to impact negatively on most if not all health professionals is the medical, psychological, social and political ramifications of the disease itself (Miller, 1995b).

2.2.2 HIV disease: What is it?

HIV disease is a potentially chronic, disabling condition, which compromises the individual's immune system over time, resulting in illness and early death. The HIV virus is transmitted from one individual to another in body fluids, in particular, blood products and semen, usually from unprotected penetrative sexual intercourse or intravenous drug use. Historically some people have become infected with contaminated blood products. Infants and children have also been infected in utero or at birth from vertical transmission of the HIV virus from an HIV infected mother. Transmission, however, is not inevitable through these events and some people remain non-infected despite repeated exposure to the virus.

2.2.3 Working with the chronically ill and dying

The fear and stigma associated with HIV infection and the threat of developing AIDS and dying presents an emotional challenge to most individuals whether they are infected or affected by it (Bor & Miller, 1988). This may be compounded with feelings of guilt, anger, fear of disclosure, and concerns about significant others who may also be infected. Many HIV infected individuals will have emotional difficulties such as anxiety, depression and suicidal ideation as they adapt to their diagnosis. They may develop HIV related dementia or physical disabilities. They may rely heavily on HIV professionals for advice and support particularly when they feel they cannot talk to others about their 'secret'. Some individuals will be well known to staff where there has been a previous long standing professional relationship, for example in Genitourinary Medicine clinics and Haemophilia Services. Others may develop a long-term professional relationship with their clients over a number of years, whilst being seen for medical or psychosocial care. Some HIV professionals may be more prone to burnout because of large caseloads or time spent in direct clinical work. Percentage time spent with clients may be an important factor in stress and burnout (McKusick & Horstman, 1986).

Working with the terminally ill involves intense and often difficult working circumstances for health workers. For HIV professionals, however, sequential and multiple bereavements might be particularly erosive over time (Sherr et al., 1992). Some HIV professionals may also be challenged in their personal lives because they or their significant others are affected by HIV. In a sample of HIV professionals, for example, it was found that stress and burnout in HIV professionals may be linked to

age and worker identification with a young client group. Catalan and his colleagues have found that heterosexual health workers are more likely than gay health workers to experience burnout working with an HIV infected population. They suggest that worker identification with clients' sexuality may have a buffering effect against work stress, increasing work satisfaction and achievement and ability to relate to the client (Catalan et al., 1996).

2.2.4 Families, secrets and confidentiality

The families of HIV infected individuals may also place an emotional burden on the HIV professional, looking for support or someone to express their sadness and anger with, or at. The clients' families may also provide the worker with a sense of reward and achievement, which may buffer the HIV professional against stress and burnout. Very little is known about how the client's family impacts on stress and burnout in HIV professionals. This requires further investigation, which is beyond the scope of this study, but is none-the-less a very important area of research to develop in understanding stress and burnout in HIV professionals.

The families in which a number of individuals including children are affected may be particularly difficult and distressing work for HIV professionals; with difficult decisions needing to be made about fostering and adoption, medical treatment, and breaking bad news for example. Some workers will find themselves working with individuals, couples or a family where secrets abound or confidentiality is challenged. Individual interpretation of confidentiality parameters may also mean that the health professional feels that he or she cannot discuss aspects of client work at home or with other colleagues, and therefore misses out a vital aspect of social

support as a buffer against stress and burnout (Leiter, 1990, 1991; Dignam & West, 1988; Salt, Callow & Bor, 1992).

2.2.5 Fear and risk of HIV infection

Health professionals are at minimal risk of infection (with adequate precaution) from occupational contact with HIV infected individuals. Some individuals (or their families), however, may be disproportionately concerned about the risk (Elford & Cockcroft, 1991; Krasnik et al., 1990). Education and experience has a role to play in modifying these health beliefs, but anxieties and prejudice may still persist for a minority creating a source of occupational stress for some staff (Eakin & Taylor, 1990; Klimes et al., 1989). HIV care also involves working with individuals who are fearful about AIDS rather than have the infection. These people may be particularly difficult for the HIV professionals to encounter because some are not responsive to logical explanation and reassurance and repeatedly seek advice and reassurance (Miller, Acton & Hedge, 1987).

2.2.6 Summary of job specific stressors in HIV care work

HIV care then involves dealing with emotive issues on a daily basis, including death, socially stigmatised issues, fear, isolation, secrets, pain, loss, grief, disfigurement, disability and other forms of human suffering (Jones, 1981; McCarthy, 1989; Paxton & Axelby, 1994; Firth-Cozens, 1987; Ulrich & Fitzgerald, 1990; Bor & Miller, 1988). In addition, there is a much broader spectrum of potential sources of stress for HIV professionals in their day-to-day work with clients including the management of secrets and confidentiality, fear of occupational risk of infection,

working with families, and managing 'the worried well'. The 'job specific' sources of occupational stress are not solely client-related but include the client's family. In the next section, consideration will be given to broadening the view of stress and burnout in HIV care still further, by incorporating the organisational aspects of HIV service development into the analysis. These include organisational structures and process, interpersonal relationships, role ambiguity and conflict as outlined by Cooper (1983) and presented in Section 1 (p.20).

2.3 HIV service related stressors

2.3.1 Organisational change and loss

In recent years in the UK National Health Service, the development of the purchaser/provider environment and re-organisation of departments and staff has involved considerable organisational change (Halton, 1995; Paxton & Axleby, 1994). This may all change again within a new government. Other social services and voluntary sector health agencies have also undergone changes, developments and cost improvement initiatives. These changes have generated a potential source of stress for employees as they adapt to change and develop new identities, task and roles, deal with loss of colleagues, teams, career plans and in some cases, their jobs (Warr & Jackson, 1985). Organisational change is a well documented antecedent of occupational stress (Cooper, 1983).

2.3.2 HIV care teams

The psychological, medical and social implications of HIV necessitates multidisciplinary and multi-agency collaboration. HIV teams often rely on collaboration and co-ordination and do not always have clear leadership structures, or shared understanding of roles and remit, especially among paramedical groups. Lack of clarity can result in ambiguity, confusion and conflict (Schwab et al., 1986; Farber, 1983). The blurring of roles and tasks and need to compete for funds in some health care agencies means that there is potential for internal confusion, conflict and work stress. Access to clients may also be an issue between HIV professionals. Confidentiality practices may restrict collegial access to clients, provoking debate, conflict and territoriality between professionals (Bor et al., 1998). Limited numbers of clients, or too many professionals involved, may result in professional rivalry (Barbour, 1995). Similarities and differences between health professionals and services are not always seen in terms of complementarity (Campbell, et al., 1994). Similarities may lead to ambiguity and competition; differences may result in demarcation and conflict. When boundaries are blurred there may be commonality, but lack of clarity. When they are sharply defined, they may appear like an impenetrable force field; keeping some in and others out. Ambiguity and conflict have both been linked to stress (Schwab et al, 1986; Farber, 1983). Workers may engage in 'fight or flight' communications and responses; this being the first stage of the stress response proposed by Seyle (1956).

2.3.3 Limited career options, training and support

There is an increasing tendency to offer limited and limiting posts in health care, related to financial constraints and current management practices. This has been particularly evident in HIV services. Posts may be time-limited (short-term contract), cost-limited (vulnerable to reduced funding and cost improvement initiatives), or career-limited (have limited career progression and development opportunities). Some health professionals may be vulnerable to stress because their post lacks security, planning, decision making, development opportunities, career enhancement, personal development, achievement and satisfaction (Cooper, 1983). This may result in decreased morale, boredom and burnout (Pines et al., 1981; Drexler et al., 1994).

Some HIV posts have been developed, such as HIV counsellors, without adequate consideration of long term funding and development, or how these posts might become linked to mainstream services. Some HIV professionals have found themselves in managerial positions without concomitant training and experience in these executive tasks. Not only could it be stressful for these workers, but also subordinates might suffer as a result of poor or inadequate management and supervision (House, 1981).

2.3.4 HIV services: The current situation

HIV services have undergone rapid expansion and change over the last twenty years. Initially they were set up in reactive formation with money being given for service

development without a long-range plan of action. Services were developed to support HIV infected and affected individuals at a time when it was untreatable and at one point non-screenable. As time has evolved and although there still is not a cure for HIV disease, medical treatments and psychosocial care have also advanced. Clients are potentially living for longer with improved quality of life. This is also partly a reflection of HIV services having time to review and evaluate their practice and be more proactive in their service delivery.

In recent years, the task of caring for people with HIV disease has changed. This is largely because of the relative success of multiple drug therapies in prolonging life and reducing symptoms of HIV disease. Many HIV service managers have been required to redistribute funding and change service provision. Consequently, the roles and remit and team identity of staff have also changed. The reduction of funding and manpower in some services has resulted in mergers and closures (Salt, 1998). Some HIV professionals have been required to diversify, for example, become involved in a broader service such as infectious diseases. Others have had to be redeployed to non-HIV services or have resigned. Change and uncertainty in any organisation is a context for occupational stress (Cooper, 1983). There may also be some resistance to change; resulting in some HIV workers attempting to provide established services which no longer 'fit' the current situation. This mismatch may provide a source of stress for HIV professionals whilst they reorientate themselves.

Involvement in the process of decision making about HIV services may also be an important buffer against stress and burnout, by increasing workers' sense of control (Matheny & Cupp, 1983; Wortman, 1975). Lack of control and effortful control

have both been shown to contribute to occupational burnout (Jackson, 1983; Landsbergis, 1988).

2.3.5 Summary of client and service related sources of stress in HIV care work

Taken together, the potential client-related and organisational demands made upon the HIV professional is enormous. What is happening for the client is often reflected at an organisational level because they (the organisations) are reactive and developing in response to the medical, cultural, political and psychosocial situation of HIV affected individuals. What is happening in the organisation, such as reorganisation, change, loss, task and role reorientation of staff, will similarly affect clients and their families. As such, the clients, their families and staff are all part of a larger system, which is dynamic and changing. In view of the interactive and reciprocal nature of interpersonal relationships, focusing on one group of people (the clients) will give a distorted picture of the interpersonal sources of stress in HIV services. More broadly, interpersonal sources of stress in HIV care work will include, for example, the client, the client's family, the manager, the same professional colleagues, and the multidisciplinary team. Given the stress buffering effect of supportive relationships, it might also be prudent to consider how professional relationships may act as a stress buffer for HIV professionals. More broadly still, the stressful and supportive nature of home relationships should also be considered (Leiter, 1990; 1991).

2.4 Coping with stress in HIV services

How the HIV professional copes with the client-related and organisational sources of stress depends on the range of personal and organisational coping resources available to him and his belief (self-efficacy) in his ability to access and execute the coping response successfully (Cherniss, 1993). Matching the right kind of coping response to a given problem may also increase coping effectiveness. Each individual has a unique resource for coping with perceived stress. Some coping strategies are health enhancing, for example, relaxation or exercising. Other coping responses compromise health, for example cigarettes, alcohol and other drug use (Conway et al., 1981; Plant, Plant & Foster, 1992). Some individuals look within themselves for the solutions and others look for others to support them and for organisational answers (Cox, Kuk & Leiter, 1993). Some people adopt a problem focused approach, trying to *do* something to change the situation, others adopt an emotion focused approach, choosing to do something which makes them *feel* better rather than change things (Folkman et al., 1991). Many individuals use a combination of health risk and health enhancing coping strategies, emotion focused and problem focused coping methods, and at times take control themselves and at other times look for others to take the responsibility; depending upon their appraisal of the situation.

2.4.1 Self-efficacy

Coping may be mediated by self-efficacy. Self-efficacy theory (Bandura, 1977) is concerned with an individual's belief that s/he can execute a particular behaviour

successfully. The higher the individual's self-efficacy, the more s/he is likely to execute a particular behaviour. In terms of stressor appraisal and coping, how the individual perceives the stressor, for example as personally changeable or not, is important. The individual needs to believe in his/her ability to execute the coping strategy. Having a range of coping strategies is not sufficient to predict satisfactory coping. Generalised self-efficacy should therefore be taken into consideration to account for an individual's belief in his/her ability to cope (Schwarzer & Jerusalem, 1993).

2.4.2 Social support

Several studies investigating occupational stress have identified social support as a key modifier of perceived stress and psychological strain (Leiter & Maslach, 1988; Dignam & West, 1988; Leiter, 1990, 1991; Constable & Russel, 1986; Cottington & House, 1987). The buffering hypothesis model of social support suggests that social support will protect an individual under high stress conditions, but will have little effect on individuals under low stress conditions. In this model, social support does not so much improve stress levels or health, but rather buffers the individual from the effects of high levels of stress. The way in which others act as a stress buffer is believed to be related to their role in changing the individual's appraisal of a stressor. They may offer practical support, emotional support, or challenge the individual's cognitions. There is also some evidence to support the view that social support may have a direct effect on stress by giving the individual a sense of belonging and increased self-esteem (Cohen & Wills, 1985).

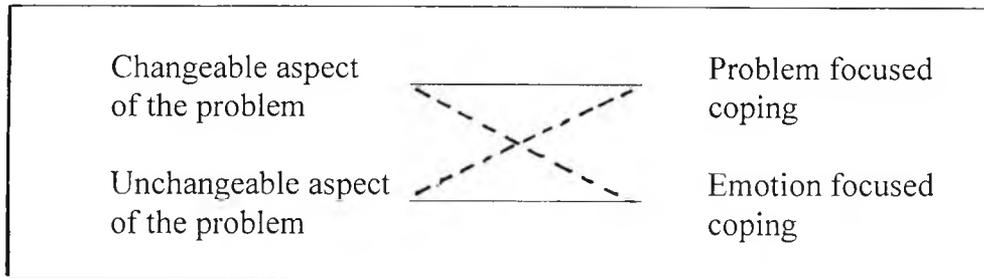
2.4.3 Coping effectiveness

Susan Folkman and her colleagues at the University of California have developed a theory of coping effectiveness which revolves around the notion of 'goodness-of-fit' between changeability of the stressor and kind of coping strategy used (Folkman et al., 1991). These researchers differentiate two main styles of coping. They are

- problem focused coping (changing the stressor at source)
- emotion focused coping (reducing the impact or effects of the stressor)

The stressor is appraised in terms of changeable and unchangeable aspects. Coping effectiveness hinges on the match or fit between the changeability of the problem and the type of coping strategy used. Although it is possible to apply problem or emotion focused coping strategies for a range of problems, coping effectiveness is optimised when there is congruence between adopting emotion focused coping strategies for unchangeable aspects of the stressor and adopting problem focused coping methods for changeable aspects of the stressor (see figure 2.4.3).

Figure 2.4.3 Changeability of the problem and congruence of coping style



Key:
 ————— Congruent coping
 Non-congruent coping

Coping effectiveness and stress prevention is derived through increasing the individuals' ability to;

- i) appropriately appraise the changeability of stressors and
- ii) enlist congruent coping methods (which may include developing new coping skills to extend personal repertoires).

An example of this might be where 'marital problems' is appraised as the global stressor. 'Financial worries' is one aspect the problem which might be viewed as a changeable. It could be dealt with in a problem focused way e.g., with advice from a debt counsellor to rectify matters. This would be an example of congruent coping. Alternatively, both partners could adopt an emotion focused approach and do something that would make them feel better (temporarily) such as drinking alcohol

excessively, or relaxation training. This would not change a 'changeable problem' and would be classed as non-congruent coping. In the long-term, it may compound the problem and be maladaptive.

2.4.4 Social support and coping effectiveness theory

Good collegial, supervisory and management relationships at work and the support of family and friends at home have all been identified as potential stress buffers (Cobb, 1976; Leiter, 1990, 1991; Cohen & Wills, 1985; Schaefer et al., 1981; House, 1981; Wills, 1984). Matching the right kind of social support from colleagues and family to aspects of the stressor to assist coping has also been incorporated into coping-effectiveness theory although it remains to be demonstrated empirically. Coping effectiveness is thought to increase where an individual solicits the help of another whose coping style (emotion or problem focused) is congruent with the perceived changeability of the problem. An example would be in the case of the global stressor 'bereavement', and choosing a sympathetic, good listener for emotional support for an unchangeable aspect of the problem (e.g., loss of a loved one) and a practical, 'doing' person for the changeable aspects of the problem (e.g., servicing the will and dealing with the estate).

Coping effectiveness theory could provide a basis for increasing understanding about stress and burnout in HIV professionals and provide evidence for offering Coping Effectiveness Training (Chesney & Folkman, 1993) to health workers to reduce stress and burnout. Coping Effectiveness Training (CET) has been used to reduce stress and depression in HIV positive individuals in a San Francisco CAPS study

(Chesney, 1994). It may be equally valuable to the carers of these people; both lay and professional.

Coping Effectiveness Theory also provides a theory for improving the match between type of problem and type of social support. It predicts that coping with practical, changeable problems would benefit from enlisting practical support from others. Coping with non-changeable problems, however, would benefit from enlisting emotional support. This may suggest that in certain situations, enlisting congruent support may be more effective in reducing stress than enlisting a non-congruent form of help. No published research investigating Coping Effectiveness Theory and social support was found by the author.

2.5 Measuring occupational stress among HIV professionals

How the impact of stress on staff is measured depends upon the model of stress and burnout being applied. As has been highlighted in section 1 (p.19) a Maslachian interpretation of burnout confines the researcher and interventionist to a single source of stress, the client, rather than a broader view of stressors associated with health care work (Maslach & Jackson, 1986). It also conceptualises the client as an external stressor without broader consideration of the mediating variables to include health workers' cognitive appraisal, coping resources, personality factors, organisational sources of stress and social support; all of which feature in the stress and burnout literature more generally. Thirdly the health work is viewed in isolation rather than as part of a dynamic health care team. The Maslach Burnout Inventory is thus not a general measure of work stress and burnout, but rather a measure of stress emanating from client contact. Any study investigating stress associated with

working in HIV services more broadly would therefore require measuring other sources of stress as well as using a more general measure of stress and health. On the basis of the above discussion, a more broad and appropriate assessment of occupational stress in HIV services could include the following psychometric measures in addition to the Maslach Burnout Inventory.

2.5.1 Stress & burnout

As described, the Maslach Burnout Inventory (Maslach & Jackson, 1986) purports to measure professional worker stress and burnout emanating from client sources of stress and not other interpersonal relationship stressors at work. The MBI questionnaire yields three sub-scale scores; emotional exhaustion (EE), personal accomplishment (PA) and depersonalisation scores (DP) each with three classifications of burnout (low, moderate or high level of burnout). The higher the score is for EE and DP and the lower it is for PA, the more stressed and burnout the individual is predicted to be.

2.5.2 Perceived stress

The Perceived Stress Scale (PSS) measures perceived stress generally, irrespective of the source of stress. There are, however, no clinical cut-off scores currently available for this scale (Cohen, Kamarck & Mermelstein, 1983).

2.5.3 General health measure

The GHQ-12 questionnaire yields a composite score for depression, anxiety, somatic symptoms and social functioning. It has a clinical cut-off score of 2/3 when using the caseness method of scoring. It can also be scored using a likert method of scoring, making it appropriate for correlational analysis (Goldberg, 1992).

2.5.4 Self-efficacy

The Generalised Self-Efficacy scale measures generalised self-efficacy. It is a ten-item scale and generates a total score from between 10 - 40. There are no published clinical cut off scores (Schwarzer & Jerusalem, 1993).

2.5.5 Coping

The COPE questionnaire (Carver, Scheir, & Weintraub, 1989) has 60 items loading onto 15 coping response scales to examine how the subject coped with a given stressful event. It can be used in a dispositional or situational format.

2.5.6 Coping effectiveness

To assess coping effectiveness, the COPE questionnaire can be analysed to assess whether the individual tends to adopt an emotion-focused or problem focused approach to coping for a given situation. The situation would require open ended-

feedback to ascertain if it was changeable or not, and the individual would need to specify whether he believed it to be changeable or not (Chesney & Folkman, 1993).

2.5.7 Social support

The Significant Other Scales (SOS scales: Power, Champion & Aris, 1988) measure the amount and type of support from a range of significant others. The types of support include practical, emotional and social support yielding a composite score across each type of support or comparative data to investigate differences between the actual and ideal amount of support the individual receives from each significant other.

2.5.8 Personality and team dynamics

The Myers Briggs Type Indicator (Myers, 1962) is a well established psychometric tool used to assess individual personality types and team relationships (Myers & Myers, 1995). Specifically it can be used to identify the possible interaction between team members' personality preferences and styles of working. This includes analysis of the likely strengths and weaknesses of the team and areas of complementarity and conflict. The Jungian theory upon which this assessment questionnaire is based asserts that there are sixteen basic 'types' of personality (Jung, 1923). This theory has been linked to stress proposing that when an individual is under prolonged stress, the most used personality functions, the dominant and auxiliary functions 'burn-out'. The inferior function (which as the name suggests is the individual's least well developed personality function), manifests in a pathological way when the individual is under stress. This analysis of burnout can account for a variety of

clinical pathology and be used as a springboard for individual or team intervention (Quenk, 1996).

2.6 When the demands exceed resources among HIV professionals

As was described at the outset of this section, the amount an individual feels 'stressed' is dependent upon the interaction of external demands or stressors and the way in which the individual perceives and copes with them. When the demands of work are matched or balanced with the resources of the individual, then performance at work is optimised. Stress arousal can be a positive, energising experience. When the demands are excessive, or personal and organisational resources are insufficient, however, there will be an imbalance. The demands of work will outweigh the resources of the individual and negative stress will result (Cox, 1981). This will negatively impact on the worker, his colleagues, peers and subordinates, the service users, team performance and organisational effectiveness (Cooper, 1983).

Client contacts are increasingly becoming the benchmark for job and service survival (Halton, 1995). In high client contact health care settings, workers may be over-stretched and feel dissatisfied with the quality of care they can give. In contrast, in low contact areas, HIV professionals may be at risk of stress from worker-isolation and lack of social and managerial/supervisory support. They may also become bored or unsatisfied with their work because it is not what they hoped for (Drexler et al., 1994).

HIV workers who are inadequately trained or supported to do their job will lack resources to cope with the demands of their work. This might be particularly

relevant for HIV workers who have volunteered for, or gained experience in HIV work, rather than have a formal training in a health care profession such as social work, psychology, counselling, or medicine for example. Such training might have given them a broad skills base to apply to different work situations.

Although (ideally) health care professionals are 'trained' to cope with working with the ill and dying, this training does not normally extend to teaching them about organisational functioning, team performance and interpersonal relationships with colleagues. For this reason, HIV workers may be more prone to stress emanating from organisational rather than client sources of stress. That is, they may lack the coping resources to deal with colleagues, teams and managers; rather than client's and client's families. The demands of the organisation are more likely to outweigh the HIV professional's coping resources, than will the client-related demands of the job. In line with a transactional model of stress, the imbalance between the demands and coping resources will give rise to occupational stress. Even if there are similar levels of organisational and client-related stressors, HIV professionals are more likely to perceive stress emanating from the organisation because they are theoretically less able to cope with it. This remains to be empirically demonstrated.

2.7 Managing occupational stress in HIV services

As was discussed in Section 1, some health professionals have been found to self-report that interpersonal and team issues are a major source of stress and tension. In a survey of 110 nurses, for example, Leiter found that only 12% identified clients as the cause of stress compared to the remaining 78% who identified colleagues, other professionals and administrators as a source of stress (Leiter, 1991). In another

study, it was found that the nurses reported co-worker interactions ten times more often than client interactions, as a source of stress (Leiter & Maslach, 1988). Within the HIV field, Barbour found that almost 25% of the participants in her survey study indicated that multidisciplinary and interagency relationships were the most demanding aspect of HIV care work. Should stress management involve teaching health workers how to get on better with their colleagues? Miller and Gillies (1996b) concluded from their survey study of HIV and oncology professionals that staff expressed a preference for individual, 'out of house' support to help them manage their occupational stress. The commonly cited obstacles to accessing internal support were;

- lack of trust in colleagues about how they would use the information
- feelings of vulnerability about being viewed as unprofessional or unsuitable for their job.

These authors suggested that it is common practice to impose staff support schemes without really taking onboard what staff feel they want and would use. It may be, however, that these health professionals preferred outsider support to *avoid* direct communications with peers, managers and subordinates. Health professionals may be trained to communicate with clients, but they are rarely trained to communicate with each other. External support might collude with individual and organisational secrets, but not necessarily address them and offer organisational solutions (Campbell et al, 1994).

There is research-based evidence from the corporate sector to suggest that organisational interventions may be more effective than employee assistance programmes (Cooper & Cartwright, 1994; Ganster et al., 1982; Shinn et al., 1984; Murphy, 1988; Golembiewski et al., 1987; Ivancevich & Matteson, 1987). Organisational interventions may be more effective because they can

- i) enhance the stress buffering effects of positive collegial relationships and/or
- ii) reduce interpersonal sources of stress

Addressing team issues and promoting trust in teams may be a prerequisite for HIV professionals to access support from each other. It may also directly reduce interpersonal sources of ambiguity, conflict and stress at work. Organisational interventions address the employee-employer 'fit', and may include organisation, team and management development as well as employee assistance initiatives as part of a balanced package.

One organisational approach to managing stress at work could include personality assessment in teams. The MBTI personality assessment has been widely used as a research tool, an assessment tool and for individual and team development intervention planning (Hammer, 1996; Hirsh & Kummerow, 1990). In particular there is research investigating personality type and vulnerability to stress, and the effects of stress on personality type (Quenk, 1996). There is also research investigating personality type and team dynamics (Hammer, 1996). There is not, however, an integration of these areas to inform our knowledge about stress and personality type in the context of teams. Conclusions about stress in teams using the

MBTI is largely conjecture, based on inference from these two distinct areas of research.

2.8 The benefits and limitations of a transactional model of stress and coping among HIV professionals

A transactional model of stress and coping effectiveness has face validity and can provide a testable theory of sources of stress, self-efficacy, coping strategy selection and coping effectiveness in health workers. The cause-effect analysis of a transactional model does provide a useful model for stress research and understanding the sources of stress in HIV care, the moderating factors and predicting the effects on the health worker (Bennett et al., 1995; AIDS care special edition; Barbour, 1994). It can also be applied to providing clinical intervention to reduce and prevent stress and burnout in HIV workers. Specifically, there are cognitive-behavioural strategies available to reduce the effects of stress and increase coping resources and coping effectiveness. The researcher-practitioner needs to take into account, however, the limitations of a transactional model of stress to reflect the dynamic nature of HIV teams and organisations and the interpersonal mediation of stress. One of the major limitations of a transactional model of stress and burnout in HIV services is that it is individualistic and static. It does not readily account for the social context of stress or the dynamic nature of human groups. Stress is in the mind's eye rather than a group dynamic. We know that poor management, supervision and collegial relationships may directly contribute to stress and burnout, whilst positive work-based relationships may buffer the individual against stress (House, 1981; Leiter, 1991; Leiter & Maslach, 1988). When the stressful demands of relationships with others outweigh the stress buffering effects of supportive

relationships, it might then follow that the individual will be vulnerable to occupational stress. What constitutes good or bad interpersonal relationships at work and how they relate to each other and occupational stress, however, needs further research and clarification. In addition, many of the sources of stress discussed in this section will impact on interpersonal relationships at work such that the effects of stress become the cause of stress and stressful relationships. An example might be as follows.

An example of organisational mediation of stress: An HIV professional who feels undervalued and overburdened with work, becomes irritable, withdrawn and takes regular sick leave. His colleagues are affected by his stress because they have more work to do, are often in conflict with him and have lost respect for their manager who has not done anything about it. The manager feels more stressed because she does not know how to deal with the problem or team conflict. Part of the reason the HIV professional felt stressed was because of his manager's poor management skills.

There is no starting point to this dynamic, although it is possible to simplify it by attributing the team stress to the HIV worker's behaviour at work and absences. Alternatively the manager who lacks management skills could be seen to be the source of stress. Similarly, the demands being made on the team as a whole, juxtaposed to inadequate resources could be viewed as the source of stress. How the problem is viewed will rest on the theoretical perspective and belief system of the person performing the analysis. It would therefore be important to take a broad view of the context in which stress arises for the HIV service or team as a whole, rather than constrain the analysis by focusing on one particular individual or interpersonal relationship. Many studies achieve scientific rigor by focusing on the causes or

effects of stress and predicting a linear relationship between them. In doing so, however, the circularity of team relationships and the context in which stress is mediated is obscured.

2.9 Conclusions

The value of interpersonal support as a stress buffer is well documented in the literature (Cobb, 1976; Schaefer et al., 1981; House, 1981; Wills, 1984; Leiter & Maslach, 1988; Burke et al., 1984; Dignam & West, 1988; Leiter & Maslach, 1988; Leiter, 1991). Likewise, occupational stress has been shown to increase when these relationships are perceived more negatively (House, 1981; Leiter, 1991; Leiter & Maslach, 1988). What is not known, however, is how these observations are related to each other. If we feel more supported by our manager, are we less likely to view her, or our colleagues as a source of stress? And what effect does a manager who is viewed as being a major source of stress have on team relationships? Can a manager be a source of stress and a source of support at the same time? Increasing our understanding of how stress manifests as part of work-team interaction rather than as a cause-effect encounter with another (single) human being may give us a more realistic view of what actually happens in the work place. Relationships at work are not independent of each other. The organisational mediation of stress in HIV care described in this section suggests that a broader approach to understanding stress in HIV services is necessary. Many of the sources of stress identified involve interpersonal relationships at work with clients, client's families, health care teams and managers. Currently, however, it is what others do to the worker in practical, emotional or cognitive terms, which is central to our knowledge about stress in HIV professionals.

The wide use of a transactional model of stress by researchers encourages the study of HIV professionals as individuals rather than as a work team or organisation. It is difficult to study dynamic relationships because a survey or even a longitudinal study are but snap shots of a dynamic and evolving process. This process is nevertheless central to understanding how stress is mediated within an interpersonal context. Investigating the dynamics within teams and comparing different HIV teams needs to be undertaken to complement the existing literature on stress and burnout in HIV professionals. Instead of asking 'what are the sources and effects of stress at work?' we could and perhaps should ask 'what is the context in which stress increases and decreases at work?' By understanding the interpersonal context of stress more fully, how stress increases and decreases as part of a dynamic system, we can learn how to manipulate the system, to change the context in which stress is mediated. Instead of relying on traditional cognitive-behavioural stress management strategies, relaxation training and support groups we could use organisational development options such as team building, task and role analysis, and individual and management development planning. This is with the aim of modifying the context in which occupational stress is mediated, rather than the HIV worker.

The biological, psychological and social nature of HIV demands an integrated and multidisciplinary approach to caring for clients affected by illness; to include the client and his family as well. Within multidisciplinary health care teams in particular, there is ample scope for role ambiguity and conflict, territoriality, poor communication, misunderstandings, withholding of information and isolation of HIV professionals and clients as part of 'team-life'. It would seem timely, given the effects that the development of combination drug therapy has had on client care and

the reshaping of HIV care services, to review our previously individualist view of HIV worker stress and burnout. Increasing our understanding of the organisational and team context of stress in HIV care may be a stepping stone towards promoting healthy HIV team functioning and good client care. All too often there is a tendency to pathologise the individual worker or the client rather than attend to the organisational and team context of stress (Leiter, 1991; Roth, 1995, Barbour, 1994). Collegial relationships, power issues, team functioning, team development and communication are important areas in the future for organisational stress management, research and stress prevention in HIV care services (Roth, 1995). This would involve extending the stress and burnout research to the study of HIV team dynamics and the development of additional interpersonal measures of stress and burnout. Furthermore, organisational approaches to stress management in HIV care teams and organisations would need to be developed and evaluated (Golembiewski et al., 1987).

3.0 Planning the research study

3.1 Rationale for this study

This study has come about for several reasons. Initially it was designed to address the observation during professional development and supervision of HIV professionals, that they often reported more stress from their interactions with colleagues than with clients and service users. This study set out to address the question: Are collegial relationships more stressful than client relationships in HIV services and if so, why? Stress in this context meaning a transaction between environmental stressors and an internal stress response, which may compromise the

individual's health. In the process of reading around the subject, however, other related issues worthy of exploration have come to light (Schaufeli et al., 1993; Bennett et al., 1995; AIDS Care special edition, 1996). Firstly it is apparent that research on stress and burnout in HIV workers is grossly biased towards studying work stress emanating from the relationship with the client; burnout being the product of prolonged work stress. In contrast, there is hardly anything about organisational sources of stress in HIV services. Indeed Maslach, a major influence in burnout research, defines burnout as being exclusive to working in human services and client sources of stress (Maslach 1978; Jackson et al., 1986). Where collegial relationships have been studied, this has largely been in the context of social support. On closer inspection, there is a small body of research to support the hypothesis that relationships at work may also be stressful. It has been shown that there may be increased stress and burnout for individuals with poor management and supervision, and 'conflict & ambiguity' at work (Leiter & Maslach, 1988; Leiter, 1991; Brookings et al., 1985; Schwab and Iwanicki, 1982). The influence of professional relationships on stress and burnout in HIV professionals, has not been fully explored and there is no research available on stress in HIV care teams. The current level of knowledge about stress and burnout in HIV professionals is skewed toward client sources of stress and therefore limited in its interpretation and application.

The second issue that needs clarification is whether colleagues can be both a source of stress as well as a source of support at the same time? Rather than categorise colleagues as being **either** a source of stress **or** a source of support, why not consider a more dynamic model that indeed they could be both. It would then be hypothesised that the degree to which an individual feels supported or stressed by

another, is dependent upon the most salient aspects of that relationship at the time the study is conducted. Dynamic interpersonal relationships at work may have a greater impact on levels of stress and burnout than the more stable personality attributes of its team members.

A third issue to be considered is which stress management interventions would be appropriate for HIV professionals. There has not been much research in this area, but what exists is biased toward promoting a clinical approach to stress management methods rather than an organisational one (Miller, 1995c). Researchers have tended to focus on clinical stress management options and group support, rather than organisational development and team building. Comparisons between these two approaches have been made in non-HIV service settings and there is evidence to support organisational rather than clinical approaches to stress management (Cooper & Cartwright, 1994; Ganster et al., 1982; Shinn et al., 1984; Murphy, 1988; Golembiewski, 1987; Ivancevich & Matteson, 1987). This may be related to the effect of organisational interventions reducing interpersonal sources of stress at work directly, or increasing social support. This is in contrast to clinical interventions that tend to focus on buffering or reducing the effects of stress by modifying the cognitions and behaviour of the health professionals. A clinical approach reinforces the view that the client is the source of stress and the health professionals' need to be 'treated'.

The pervading research agenda to date investigating stress and burnout in HIV care is consistent with, if not based upon, a client-centred interpretation of the sources of stress and burnout. It has focused on HIV professionals rather than on the dynamics of HIV teams, services and organisations. In the event that the body is able to

discern and compartmentalise different sources of stress it might be reasonable to focus on one primary interpersonal source of stress. If, however, there is an interaction or cumulative effect, at least at a physiological level if not at a psychosocial level as well, then it would seem more prudent to study the interpersonal context of stress at work more broadly.

The aims of this study, then, are to take a broader approach to assessing interpersonal sources of stress and support for HIV professionals and the impact that this has on their health outcome. A transactional model of stress and the person-environment fit, will be used as a definition of stress (Cox & Mackay, 1981). Burnout will be considered to be the outcome of prolonged exposure to stress at work to include all interpersonal relationships at work and not simply the client-carer relationship (Maslach, 1993; Cordes & Dougherty, 1993; Cherniss, 1980, 1990, 1992). The point at which stress becomes burnout remains conceptually ambiguous. For the purposes of this study, however, Maslach's client-focused interpretation of burnout, as measured by the dimensions on the Maslach Burnout Inventory, will be used alongside other measures of stress and health outcome discussed in this section, to reflect occupational stress and burnout more generally.

3.2 Aims of the study

The aim of this research is to investigate the impact different interpersonal sources of stress and support may have on HIV professionals' health outcome. The interpersonal sources of stress for HIV professionals will include the client, the client's family, the manager, multidisciplinary and same profession colleagues. The HIV professionals' home relationships such as the partner, family and friends as a source of stress will also be considered. Interpersonal sources of support will

include all of the above, except client's and clients families. Although it was recognised that some HIV staff may look to obtain support from the client, or from the client's family, it was regarded as inappropriate and unethical to do so. The author did not want to risk the possibility that some HIV professionals might interpret an item asking about this to mean that clients and their families are 'fair game' when it comes to enlisting support for oneself. For this reason, clients and their families were not included in the sources of support section, although it would have been interesting to find out whether HIV staff do in fact use their clients and the client's family as a source of support.

This research also aims to study HIV professionals in the context of their HIV teams; rather than sample a number of HIV professionals from different organisations as already has been investigated (Miller, 1995a). The way in which this study is different is that complete HIV teams have been studied using interview, observation and personality assessment methods to reflect team dynamics. The mediation of stress in these teams will be a primary focus for discussion. Although requiring 100% compliance might compromise overall numbers of individuals available to take part and increase selection bias, it was regarded as imperative to have the **whole team** taking part in order to study team behaviour. Specifically the study aims to:

1. To explore the relationship between interpersonal sources of stress and sources of support for staff and health outcome.
2. To compare health outcome and coping effectiveness for 'congruent copers' and 'non-congruent copers'.
3. To apply the Myers Briggs Type Indicator personality assessment to assess team issues and interpersonal relationships.

3.3 Hypotheses

- I. It is predicted that the more stressful and less supportive interpersonal relationships at work are perceived to be by the participants, the higher the MBI emotional exhaustion, Perceived Stress Scale and GHQ-12 scores are likely to be. The depersonalisation scores are unlikely to be affected by non-client interpersonal sources of stress. Self-efficacy (GSE) may be reduced.
- II. The more supportive work relationships are perceived to be, the less they will be viewed as stressful by participants. There will be a negative correlation between interpersonal sources of stress and sources of support.
- III. Congruent copers will have significantly lower MBI emotional exhaustion, Perceived Stress Scale and GHQ-12 scores and higher Generalised Self-efficacy scores compared with non-congruent copers.
- IV. The Myers Briggs Type Indicator personality assessment will provide a method for describing and predicting interpersonal conflict and stress in teams and to some extent, group process.

3.4 Method

3.4.1 Participants

Four HIV teams were selected to take part in the study. The teams comprised an HIV ward team (n=22), a community multidisciplinary HIV team (n=9), a voluntary sector HIV team (n=9) and an HIV hospital management team (n=5). All were salaried for their work, and worked solely in HIV. All were full time workers, except two who job-shared in the HIV management team. All team members were asked to take part in the study.

3.4.2 Ethical approval and consent

Ethical approval was sought from the participating HIV care teams and the University ethics committee. Verbal and written information about the aims of the study, confidentiality and dissemination of results was provided before team and individual consent was obtained. Written consent was also obtained from the manager of each team, to preserve anonymity of individual team members' responses. These letters are not included in the appendices at the request of the organisations taking part as they would identify participants. All members were asked to complete an occupational stress questionnaire and attend a team development day with the researcher. There were two versions of the questionnaire with minor differences. A copy of the questionnaire given to nurse participants can be found in Appendix 1. For non-nursing participants, the word nurse was omitted. The questionnaire (both versions) included participant instructions, demographic information section, published questionnaires and qualitative information. All

participants were aware that they did not have to take part in the study and could stop at any point.

3.4.3 Pilot study

The occupational questionnaire (see Appendix 1) was piloted on a sample of ten HIV professionals who were not going to take part in the study. Pilot participants were asked to give feedback about problems with understanding the questionnaire items or giving answers. Small amendments were made to reduce ambiguity. The pilot participants were also timed in order to approximate how long it would take for participants to complete the occupational questionnaire. Six HIV professionals who were not taking part in the main study were assessed using published personality questionnaires in order to familiarise the author with giving personality assessment feedback.

3.5 Data collection

Information was obtained about demographic details, stressful event at work, coping style, social support, and interpersonal relationships at work. The health outcome measures used comprised self-report sick leave rate and four published psychometric instruments as follows:

- i) Maslach Burnout Inventory (Maslach & Jackson, 1986)
- ii) General Health Questionnaire-12 (Goldberg, 1992)
- iii) Perceived Stress Scale (Cohen, Kamarck & Mermelstein, 1983)
- iv) Generalised Self-Efficacy Questionnaire (Schwarzer & Jerusalem, 1993)

The questionnaire was completed anonymously to promote openness and honesty from participants, and therefore optimise the reliability of data obtained.

3.5.1 Demographic details and sick leave rate

Section 1 of the questionnaire obtained;

- i) Demographic data
- ii) Number of self-report days of sick leave in the previous 6 months

Demographic information included participants' age, gender, sexual orientation, relationship status, occupation, grading, length of time since qualifying, length of time in post, ethnic group and religion. The total number of days of sick leave /absenteeism taken the previous six months was used as a health outcome measure although it was recognised that some individuals may over or under-estimate their sick leave rate. As the questionnaire data was obtained anonymously, it was not possible to corroborate the accuracy of reporting sick leave with their human resources department. In view of the finding that some human resource departments in a similar study did not have up to date information about sick leave when approached by the researcher, it was felt that to use participant information was reasonable, but should be interpreted with caution (Miller, 1995a).

3.5.2 Health measures

Section 2 of the questionnaire comprised the following published psychological tests.

Maslach Burnout Inventory (Maslach & Jackson, 1986): The MBI purports to measure professional worker stress and burnout from client sources of stress and not other interpersonal relationship stressors at work. The MBI questionnaire was given to each participant in its standardised format to preserve reliability and validity and scored to yield three sub-scale scores; emotional exhaustion (EE), personal accomplishment (PA) and depersonalisation scores (DP) each with three classifications of burnout (low, moderate or high level of burnout). The higher the score is for EE and DP and the lower it is for PA, the more stressed and burnout the individual is predicted to be.

General Health Questionnaire-12 (Goldberg, 1992): The GHQ-12 questionnaire was used as a measure of general physical and psychological health of participants. Clinical caseness (scores above 2) have been associated with clinical pathology in the general population. The questionnaire was given to each participant in its standardised format to preserve reliability and validity and scored to yield a composite score for depression, anxiety, somatic symptoms and social functioning score. The likert (score range 0-48) and caseness (scores above 2 on total range of 0-12) method of scoring were used.

Perceived Stress Scale (Cohen, Kamarck & Mermelstein, 1983): The Perceived Stress Scale (PSS) was used to measure perceived stress generally. The PSS scale yields a score between 0-56. No published clinical cut-off scores were available at the time of the study.

Generalised Self-Efficacy Questionnaire (Schwarzer and Jerusalem, 1993):

The Generalised Self-Efficacy (GSE) questionnaire was used to measure generalised self-efficacy. GSE scores range from 10-40. There were no clinical cut-off scores available for this assessment measure at the time of the study.

3.5.3 Stressful event at work

Section 3 asked an open-ended question for participants to describe the most stressful incident they had had at work in the month prior to the study. This was for qualitative analysis as well as to be able to categorise participants' styles of coping with this event.

3.5.4 Coping style

Section 4 was the COPE questionnaire (Carver, Scheir, & Weintraub, 1989) which has 60 items loading onto 15 coping response scales to examine how the participant coped with the stressful event described.

3.5.5 Interpersonal sources of stress and support

Section 5 obtained rating scores using a 7-point likert scale for i) interpersonal sources of stress and ii) interpersonal sources of support. Perceived support from significant others and need for more support was assessed using the Significant Others Scale (Power, Champion & Aris, 1988).

3.5.6 Individual interview

Each participant was given a semi-structured and confidential interview to obtain qualitative information about his or her perceived sources of stress and support at work. This gave team members the opportunity to discuss issues, which they might not have wanted to present in a group setting. This was particularly relevant given that the teams included managers.

3.5.7 Team workshop day

Each team attended a workshop designed to elicit information about organisational and team structure and process issues for each team. The information obtained from each team was qualitative to add another dimension of information to the quantitative aspect of the study. Specifically information was collated about:

- team structure, relationships and boundaries within the organisation and external agencies
- team life history & key events
- sources of stress for the team
- communication patterns
- interpersonal conflict in or between teams/agencies
- team support

3.5.8 Personality assessment in teams

In order to have a more objective assessment of team issues, the Myers Briggs Type Indicator questionnaire was administered to participants from three of the teams (total n = 23). This included all members of the voluntary sector team, the community team and the management team. The ward team was not able to take part in this aspect of the study because of the time involved, cost and problems staffing the ward.

The Myers Briggs Type Indicator (Myers, 1962) is a well-established psychometric tool used to identify the possible interaction between team members' personality preferences for styles of working. It can help to identify the strengths and weaknesses of the team, as well as sources of interpersonal conflict and complementarity. The overall 'personality of the team' can be assessed and interpreted using the Introduction to Type in Organisations Interpretation Manual (Hirsh & Kummerow, 1990).

The MBTI personality assessment for assessing team dynamics and designing team development programmes has been widely and successfully used in the corporate, public and voluntary sectors with research data to support its application (Hammer, 1996; Hirsh & Kummerow, 1990). There is also research investigating personality type and vulnerability to stress. It would appear, however, that there is no published research currently available on applying the MBTI to studying stress in teams directly.

4.0 Results

The quantitative data was analysed using SPSS statistical package.

4.1 Characteristics of the study population

4.1.1 Sample Teams

Four HIV teams (total n=45) were asked to participate in the study. They included a voluntary sector HIV team of 9 HIV workers (9/45; 20%), a hospital based HIV team of 22 nurses (22/45; 49%), a community HIV team of 9 health professionals (9/45; 20%) and an HIV management team of 5 nurse managers (5/45; 11%). All participants worked exclusively within HIV/AIDS care and all were salaried for their jobs.

4.1.2 Team composition, response rate and profession of participants

The selection criteria involved selecting whole HIV care teams, or 'intact' teams, in order to study team structure and process and not simply a group of HIV professionals. This gave a response rate of 100% of participants (n=45), but no control over demographic variables such as age, gender and grading of team participants. Team composition by profession is given in Table 4.1.2i. The term 'HIV worker' has been used to refer to HIV professionals with no formal health care training or qualification. As can be seen in Table 4.1.2i, there were no qualified health professionals in the HIV voluntary sector. Two members from this team, however, had administrative qualifications related to their work. All the other teams

had qualified health care staff, except for one member of the community HIV team who also had no formal health care qualification.

Table 4.1.2i Team composition and participants' profession

Participating teams (n=4; 100%)	Number of participants in the team (n = 45; 100%)	Team composition by profession (n = 45: 100%)
Team 1: Voluntary Sector HIV team	9 (20%)	9 HIV workers (20%)
Team 2: Community Health HIV team	9 (20%)	1 social worker (2%) 1 psychologists (2%) 1 nurse (2%) 1 health adviser (2%) 1 counsellor (2%) 3 HIV service co -ordinators (7%) 1 HIV worker (2%)
Team 3: Hospital-based HIV team	22 (49%)	22 nurses (49%)
Team 4: HIV Management team	5 (11%)	5 nurses (11%)

Response rate = 100%

In total there were 28/45 (62%) nurses, 7/45 (16%) paramedical staff and 10/45 (22%) HIV workers with no formal health care training/qualification, as shown in Table 4.1.2ii.

Table 4.1.2ii Professional groups

Profession	n = 45	Percentage
nurses	28/45	62%
paramedical	7/45	16%
non-specific/not qualified 'HIV worker'	10/45	22%

4.1.3 Team locality and team professional group characteristics

18 participants (18/45; 40%) were community based and 27 participants (27/45; 60%) were hospital based as shown in Table 4.1.3. There is a potential confound of variables in so far as the community based teams are also multidisciplinary, where as the hospital based teams were comprised exclusively of nurses.

Table 4.1.3 Team location and professional group characteristics

Team location	Discipline	n = 45 percentage
community (teams 1 & 2)	Multidisciplinary (teams 1 & 2)	18/45 (40%)
hospital-based (teams 3 & 4)	Unidisciplinary (teams 3 & 4)	27/45 (60%)

4.1.4 Sector status of participants

10 participants came from the voluntary sector (10/45; 22%) and 33 participants came from the statutory sector (33/45; 73%). Of the 33 statutory HIV professionals, 3 participants (3/45; 7%) were from social services, 3 participants (3/45; 7%) were from a community health authority and 27 participants (27/45; 60%) from a hospital trust. Again there is a potential overlap of variables in so far as all but one nurse was employed by a hospital trust (see Table 4.1.4).

Table 4.1.4 Team sector status

Sector status	n = 45	percentage
voluntary sector	10/45	22%
social services	3/45	7%
hospital trust	27/45	60%
community trust	5/45	11%

4.2 Participant characteristics

4.2.1 Gender of participants

Of the 45 workers, 29/45 (64%) were female and 16/45 (36%) were male.

Table 4.2.1 shows the gender distribution across teams. The gender ratio was similar across teams.

Table 4.2.1 Gender distribution across teams

team n = 45	male n = 16 (34%)	female n = 29 (66%)
community	4/45 (9%)	5/45 (11%)
voluntary	2/45 (4%)	7/45 (16%)
hospital	8/45 (18%)	13/45 (29%)
management	2/45 (4%)	4/45 (9%)

4.2.2 Age of participants

Ages of participants ranged from 21 to 59 years. 4/45 (9%) participants were under 26 years old, 32/45 (71%) participants were between 27 years and 40 years old. 9/45 (20%) participants were between 41- 59 years old as shown in Table 4.2.2. The mean age was 34 years, the median age was 33 years and the mode age was 32 years.

Table 4.2.2 Age distribution

Age	n = 45	percentage
19-26 years	4/45	9%
27-40 years	32/45	71%
41-59 years	9/45	20%

4.2.3 Sexuality of participants

21/45 (47%) of respondents described themselves as heterosexual, 12/45 (27%) participants described themselves as homosexual, 4/45 (9%) participants said they were lesbian and 3/45 (7%) participants reported that they were bisexual. 5/45 (11%) participants did not answer this question possibly choosing not to disclose their sexuality. Table 4.2.3 shows the distribution of participants' sexuality preferences.

Table 4.2.3 Sexuality

Sexuality	N = 45	percentage
heterosexual males	1/45	2%
heterosexual females	20/45	44%
homosexual males	12/45	27%
lesbian females	4/45	9%
bisexual females	3/45	7%
no answer	5/45	11%

4.2.4 Ethnic group of participants

36/45 (80%) participants described themselves as white, with 2/45 (4%) participants from Afro-Caribbean origin as shown in Table 4.2.4. 7/45 (16%) participants did not fill in these details on the questionnaire. From anecdotal feedback at least one

ethnic minority participant said he did not fill this out as he felt it would identify him 'as the only black gay male nurse'. The other participants who did not complete this information may also be from ethnic groups and not want to risk being singled out.

Table 4.2.4. Ethnic group

Ethnic group	n = 45	percentage
White Caucasian	36/45	80%
Afro-Caribbean	2/45	4%
No answer	7/45	16%

4.2.5 Religion of participants

38/45 participants (84%) subscribed to a religious or spiritual belief and 7/45 (16%) said they were non-believers. The 'believers' were not predominately from any one religious group or sect. Table 4.2.5 shows believer and non-believer groups, as the cells would have been too small to make meaningful comparisons if each religion was compared.

Table 4.2.5 Religion

Religion	n = 45	percentage
believers	38/45	84%
non-believers	7/45	16%

4.2.6 Job grading

Grading was categorised as non-manager and manager positions, to be able to make comparisons between these groups. The total sample had 28/45 (62%) non-

managers and 17/45 (38%) managers. The voluntary team had 3/45 (7%) managers, the community team had 6/45 (13%) managers, the hospital team had 4/45 (9%) managers and the management team had 5/45 (11%) managers. Table 4.2.6. shows the distribution of managers across the teams and percentage proportion of managers in each team (as opposed to total sample).

Table 4.2.6 Percentage of managers in each team

Team n = 45	managers n = 17 (38%)	non-managers n = 28 (62%)
voluntary (n = 9)	2/9 (33%)	7/9 (67%)
community (n = 9)	6/9 (60%)	4/9 (40%)
hospital (n = 22)	4/22 (19%)	17/22 (81%)
management (n = 5)	5/5 (100%)	0/5 (0%)

4.2.7 Length of time since qualifying

37/45 (82%) participants had a professional qualification related to their job and 8/45 (18%) participants did not have any reported professional training. Of the 8/45 (18%) participants who were unqualified, 7/45 (15%) of them were in the voluntary sector team. The other non-qualified participant (2%) was in the community team.

Years since qualifying ranged from 6 months to 20 years. The mean time since qualifying was 7.8 years, the median was 6 years and the mode was 1 year. 7/45 (16%) participants were under 2 years since qualifying, 8 (18%) participants were between 2-5 years since qualifying, 11 (24%) participants were between 5-10 years since qualifying and 11 (24%) participants were qualified more than 10 years as shown in Table 4.2.7.

Table 4.2.7 Years since qualifying

Years since qualifying	n = 45	percentage
under 2 years	7/45	16%
2-5 years	8/45	18%
5-10 years	11/45	24%
More than 10 years	11/45	24%
No formal qualification	8/45	18%

4.2.8 Length of time in HIV speciality

Time in the HIV speciality ranged from 6 months to 16 years. The mean was 5.14 years (sd = 3.89), the median was 3.5 years and the mode was 2 years. 10/45 (22%) of participants had been in the HIV speciality for less than 2 years. For the other participants, 15/45 (33%) had been in HIV care for between 2-5 years, 13/45 (29%) for between 5-10 years and 4 (9%) had been in HIV care for more than 10 years, as shown in Table 4.2.8. 3/45 (7%) participants did not answer this question.

Table 4.2.8 Years in HIV speciality

Years in HIV	n = 45	percentage
under 2 years	10/42	24%
2-5 years	15/42	36%
5-10 years	13/42	31%
More than 10 years	4/42	10%
No answer	3/42	7%

4.2.9 Relationship status

33/45 (73%) of participants had partners and 10/45 (22%) did not, as shown in Table 4.2.9. 2 participants did not answer this question.

Table 4.2.9 Relationship status

Relationships status	N = 45	percentage
partner	33/43	77%
no partner	10/43	23%
no answer	2/43	5%

4.2.10 Length of time with partner

28/33 (85%) participants with partners reported that the length of time they had been with their partner ranged from 1 - 25 years. 13/28 (46%) of participants had been with their partner for more than 5 years, as shown in Table 4.2.10. The mean time was 6.78 years, (sd = 6.0), the median was 4 years and the mode was 1 year.

Team 4.2.10 Length of time with partner

time with partner	N = 28	percentage
Less than 2 years	5/28	18%
2-5 years	10/28	36%
more than 5 years	13/28	46%

4.2.11 Participants with child dependants

10/42 (24%) participants had children, 32/42 (76%) did not, as shown in Table 4.2.11. 3 participants did not answer the question.

Team 4.2.11 Child dependants

child dependants	n= 42	percentage
children	10/42	24%
no children	32/42	76%
no answer	3/42	7%

4.3 Occupational morbidity and sample characteristics

4.3.1 Burnout

21/41 (51%) participants had scores within the moderate to high burnout range for emotional exhaustion, 13/41 (32%) participants' scores were within the moderate to high burnout range for depersonalisation and 30/41 (73%) participants had scores within the moderate to high burnout range for personal accomplishment. Table 4.3.1 shows the number of participants in the above burnout categories for the total sample. Four participants' burnout scores could not be categorised because they had not answered all items on the sub-scales. Differences between teams and sources of stress on MBI scores are detailed in the sections on interpersonal relationships and occupational morbidity (p.98) and team differences (p.110).

Table 4.3.1 Percentage participants experiencing low, moderate and high burnout

MBI Burnout Category	Emotional exhaustion n = 41	Depersonalisation n = 41	Personal accomplishment n = 41
Low	20/41 (49%)	28/41 (68%)	11/41 (27%)
Moderate	14/41 (34%)	10/41 (24%)	21/41 (51%)
High	7/41 (17%)	3/41 (7%)	9/41 (22%)

4.3.2 MBI emotional exhaustion (MBI-EE)

Participants scored between 4 - 39 (mean = 18.58; sd = 8.97) on the emotional exhaustion scale of the MBI. 20/41 (49%) participants scored within the low burnout category, 14/41 (34%) participants scored within the moderate burnout category and 7/41 (17%) scored within the high burnout category on the MBI

emotional exhaustion scale. Four questionnaires could not be scored or categorised because of missing data on some items for the MBI emotional exhaustion sub-scale.

4.3.3 MBI depersonalisation (MBI-DP)

Participants scored between 0 - 19 on the MBI depersonalisation scale (mean = 5.95; sd = 4.1). 28/41 (68%) participants scores were within the low burnout category, 10/41 (24%) participants scored moderate burnout and 3/41 (7%) scored high burnout on the MBI depersonalisation scale. Four questionnaires could not be scored or categorised because of missing data on some items for the MBI depersonalisation sub-scale.

4.3.4 MBI personal accomplishment (MBI-EE)

Participants scored between 15 - 45 on the MBI personal accomplishment scale (mean = 33.8; sd = 7.4). 11/41 (27%) participants scored within the low burnout category, 21/41 (51%) participants scored moderate burnout and 9/41 (22%) scored high burnout on the MBI personal accomplishment scale. 4 questionnaires could not be scored or categorised because of missing data on some items for the MBI personal accomplishment sub-scale.

4.3.5 Sick leave

Staff sick leave was self-reported and may be particularly open to under and over reporting of days of sick leave (as discussed in the method section p. 73). With this

in mind, sick leave in the six months prior to the study ranged from 0 to a total of 18 days during the 6 months prior to the study ($n = 41$; mean = 3.87; $sd = 3.9$: median = 3 days: (bi)mode = 0/3 days). Table 4.3.5 shows the number of days of reported sick leave for participants. 4 participants did not answer the question, which may have made a difference to the overall picture because of the potentially high degree of variability for sick leave for participants. The variability for this sample however, although greater than 3 sd , was not particularly large at 3.9.

Table 4.3.5 Participant sick leave in previous 6 months

Sick leave	n=45; percentage
0 days	8/45 (18%)
1 – 3 days	16/45 (36%)
4 – 18 days	17/45 (38%)
no answer	4/45 (9%)

There were no significant differences between those who had 0, 1-3 days of sick leave versus those who had 4 or more days of sick leave across sources of stress scores or other health outcome measures, or sources of support measures. There were also no significant correlations between sick leave and other measures obtained in this study. The problem with obtaining reliable information about sick leave, particularly from self-report, may have obscured any real effects.

4.3.6 General Health (GHQ-12)

11/42 (26%) of the number of participants scored above the clinical caseness cut off score on the GHQ-12 as shown in Table 4.3.6. Scores ranged from 0-10 (mean score = 2.9; sd = 5.6; median = 2; mode = 0).

Table 4.3.6 GHQ-12 caseness scores for participants

GHQ-12 caseness score	n = 42; percentage
0-2	31/42 (74%)
3-10 (caseness)	11/42 (26%)

Differences between teams, participants, sources of stress, coping methods and sources of support on GHQ-12 scores are detailed in the sections on qualified/unqualified differences (p93) gender differences and dependants differences sections (p 94) and sources of stress (p 96).

4.3.7 Perceived stress

Participants scores on the Perceived Stress Scale (PSS) ranged from 10-44 (38/45; 84%: mean = 22.9; sd = 8.6). There are no published cut off points but the minimum which can be scored is 0 and maximum is 56. The sd is large for this sample suggesting a high degree of variability in perceived stress scores. Differences in PSS scores are detailed in the section on sources of stress (p 96).

4.3.8 Self-efficacy

Scores for generalised self-efficacy ranged from 10 - 37 (38/45; 84%: mean = 30; sd = 7.59). There are no published norms with cut-off for caseness. The minimum score possible is 10 and the maximum score possible is 40. The sd was similarly large for this scale, suggesting a high degree of variability in generalised self-efficacy scores for this cohort.

There were no significant differences between participant characteristics and self-efficacy. There was also no significant correlation between self-efficacy and health outcome measures. There was, however, a significant negative correlation between self-efficacy and number of years since qualifying ($r = -.490$; $p = 0.005$) and self-efficacy and time in speciality ($r = -.378$; $p = .023$). Age differences were not a factor. These results suggest that the longer the HIV professionals have qualified and/or have been in the HIV speciality, the lower their self-efficacy is, in this study. Causality is not known and nor was this a longitudinal study, but this finding may suggest that self-efficacy may decrease over time.

4.3.9 Self-reporting of use of alcohol/drugs

This study was not designed to investigate lifestyle behaviour and substance use specifically, although it is acknowledged that use of substances may fluctuate with perceived stress and impact on health. With this in mind, the COPE questionnaire, which includes items measuring the use of alcohol/drugs as a method of coping with stress was analysed separately. Scores on the COPE scale (4 items) for substance use ranged from 1 - 16 (38/45; 84%: mean = 8.1; sd = 3.64). The published norm for

university graduates for the situational version on the COPE is 1.29 and $sd = .72$. This, however, was based on a single item (item range 1 - 4). There are no published norms using the four item version. Analysis of variance yielded a significant difference between congruent copers (10/37; 22%: mean = 6.35; $sd = 5.2$) and non-congruent copers (7/37; 16%: mean = 11.85, $sd = 3.2$); with non-congruent copers being more likely to use alcohol as a method of coping with stress ($F = 6.13$; $p = .026$). The numbers were small for this analysis and may account for the significant result. The variance for congruent copers was also wide with an sd of 5.2.

4.4 A comparison of participant characteristics

4.4.1 Managerial versus non-managerial participants

There were no significant differences between manager and non-manager health outcome measures. There was, however, a significant difference between managers (17/45; 38%: mean = 4.57) and non-managers (28/45; 62%: mean = 3.26) perceptions of sources of stress scores with managers viewing the multidisciplinary team to be significantly more of a source of stress than non-managers ($F = 4.86$; $df = 1$; $p = 0.034$).

4.4.2 Professional group differences and health outcome

There were no significant differences between nurses, paramedical workers and HIV workers on health outcome measures. They differed, however, in their perception of the multidisciplinary team as a source of stress ($F = 4.46$; $df = 2$; $p = .02$). The

paramedical professionals (7/41; 16%: mean = 5.6) found the multidisciplinary team to be a significantly greater source of stress than the nurses (25/41; 61%: mean = 3.04) and HIV workers did (9/41; 20%: mean = 3.7).

4.4.3 Qualified versus non-qualified health professionals

Participants who have a health professional training qualification (27/37; 73%: mean = 10.4, sd = 4.7) scored significantly lower on the GHQ-12 (likert scoring) compared with those without such training (10/37; 27%: mean = 15.08; sd = 7.9) ($F = 5.23$; $df = 1$; $p = 0.03$). Participants who have a health professional training qualification (27/37; 82%: mean = 20.45, sd = 7.69) also scored significantly lower on the PSS compared to those without such training (10/37; 18%: mean = 26.84, sd = 9.22) ($F = 5.05$; $df = 1$; $p = 0.03$). These results suggest that unqualified HIV professionals may be experiencing greater psychological/physical health problems and stress compared with clinically qualified staff.

It was also found that participants who have a health professional training qualification (27/37; 73%: mean = 3.47, sd = 1.34) scored significantly higher on 'client's family' as a source of stress, compared to those without such training (10/37; 27%: mean = 2.46; sd = 1.61) ($F = 4.113$; $df = 1$; $p = 0.05$). This may suggest that unqualified staff are less stressed by the clients' families, but it may also reflect that they have less to do with clients' families. Qualified staff may have, or seek to have, more contact with clients' families compared with non-qualified staff. This may be particularly applicable to ward-based HIV professionals who may see clients' families on a routine daily basis for many of them as part of in-patient visiting.

4.4.4 Location differences and health outcome

Participants from community-based teams (18/45; 40%: mean = 5.17) perceived the multidisciplinary team to be significantly more stressful than did hospital-based teams (27/45; 60%: mean = 3.21) ($F = 7.1$; $p = .01$).

4.4.5 Sexuality differences and health outcome

There were no differences between participants on the basis of sexuality preference except for partners viewed as a source of stress. Homosexual males (12/37; 32%: mean = 1.67) scored significantly lower on viewing their partner as a source of stress compared with heterosexual participants (21/37; 57%: mean = 2.7), and lesbian participants (4/37; mean = 2.75) ($F = 3.738$; $df = 2$; $p = 0.024$).

4.4.6 Differences between participants with children

Participants with children (10/40; 25%: mean = 6.78) scored significantly higher on the GHQ-12 (caseness) compared to those who did not have children (30/40; 75%: mean = 2.45) ($F = 4.309$; $df = 1$; $p = 0.045$). This finding may be linked with gender differences (below).

4.4.7 Gender differences and health outcome

Analysis of variance showed that females (26/40; 65%: mean = 13.41) scored

significantly higher on the GHQ-12 compared to males (15/40; 38%: mean = 9.26: $F = 4.476$; $df = 1$; $p = 0.04$). This may have been related to the finding that participants with children (10/40; 25%: mean = 6.78) scored significantly higher on the GHQ-12 (caseness) compared with those who did not have children (30/40; 75%: mean = 2.45: $F=4.309$; $df = 1$; $p = 0.045$). 10/10 (100%) participants with children were female. A Chi-square analysis of participants with and without children, scoring below and above the caseness cut off (2/3) on the GHQ-12 was not significant ($X^2 = .455$, $df = 1$ $p = .5$: Fisher score = .694; $p = .383$). This may be caused by small numbers of participants, rather than non-significant differences in the expected and observed distribution of participants.

4.4.8 Religion differences and health outcome

There were no significant differences between religious and non-religious participants on any of the health outcome measures, sources of stress, style of coping or sources of support measures.

4.4.9 Differences in length of time in HIV speciality and health outcome

Time in HIV was categorised into three time bands; less than 2 years, between 2-5 years and 6 or more years in HIV speciality. MBI depersonalisation scores were significantly higher for participants who had been in the HIV speciality for between 2-5 years (15/38; 39%: mean = 8.26; $sd = 4.4$; $df = 2$, $F = 4.92$; $p = .01$ compared with less than 2 years (9/38; 24%: mean = 3.5; $sd = 1.9$) and 6 or more years (14/38; 37%: mean = 5.3; $sd = 3.7$). This difference may be related to a higher degree of variance for scores in two of the age bands.

There were also significant differences between participants who had been in the HIV speciality for less than 2 years, 2-5 years and 6 or more years in their perception of sources of stress and support. These differences will be discussed in the relevant section (p 100).

There was also a significant negative correlation between Generalised Self-efficacy scores and time in HIV speciality (36/42; 86%: $r = -.9$; $p = .005$) and time since qualifying, for those who held a health professional qualification (31/35; 89%: $r = .378$; $p = .023$). Age was not a factor.

4.5 Interpersonal sources of stress and support and occupational morbidity

The mean scores for the sources of stress were rank ordered. As can be seen in Table 4.5 participants' mean scores were highest for multidisciplinary team sources of stress (mean = 3.72; sd = 1.86) followed by client (mean = 3.56; sd = 1.5), same profession colleagues (mean = 3.39; sd = 1.78) and manager (mean = 3.31; sd = 1.84) sources of stress. Family and friends (mean = 2.61; sd = 1.7) and the partner (mean = 2.71; sd = 2) were viewed to be the least sources of stress for this sample.

Table 4.5 Rank ordered sources of stress

Source of stress	n	mean	sd	Rank order
Multidisciplinary team	40	3.72	1.86	1
Client	41	3.56	1.5	2
Same profession colleagues	41	3.39	1.78	3
Manager	41	3.31	1.84	4
Client's family	41	3.09	1.54	5
Partner	41	2.78	2.01	6
Family & friends	41	2.61	1.74	7

4.5.1 Cluster analysis of sources of stress

In view of the relatively low number of participants in this study, it was not viable to conduct a factor analysis in order to assess how the sources of stress relate to one another and group together as factors. Rather, a cluster analysis was performed which clusters variables according to the statistical 'distance' between the groups of variables. The groupings for sources of stress were same profession colleagues (cluster 1), manager and multidisciplinary team (cluster 2), client's and client's family (cluster 3) and partner and family and friends (cluster 4) as shown in Table 4.5.1. These clusters relate to professional relationships as a source of stress (clusters 1 & 2), client-related sources of stress (cluster 3) and home/personal relationship sources of stress (cluster 4). The cluster analysis has distinguished between multidisciplinary team and manager sources of stress (cluster 2) from same profession colleagues sources of stress (cluster 1).

Table 4.5.1 Cluster analysis of sources of stress

Source of stress	N	mean	sd	Clusters
Multidisciplinary team	38	3.13	1.82	4.77(1)
Client	38	3.66	1.5	3.92(3)
Same profession colleagues	38	3.5	1.79	5.15(2)
Manager	38	3.39	1.86	4.62(1)
Client's family	38	3.13	1.56	3.23(3)
Partner	30	2.86	2.04	2.23(4)
Family & friends	38	2.63	1.74	2.00(4)

4.5.2 Interpersonal relationships and occupational morbidity

4.5.2a The client

There were no significant differences between participants' characteristics and perceiving the client as a source of stress. There was, however, a significant correlation between clients perceived as a source of stress and MBI-depersonalisation scores (41/45; 91%: $r = .344$; $p = .032$). As might be expected the greater the clients were perceived as a source of stress, the higher the depersonalisation scores were likely to be.

4.5.2b The clients' families

There were no significant differences between participants' characteristics on perceiving the clients' families as a source of stress except being clinically qualified or unqualified. Participants who have a health professional training qualification (27/37; 73%: mean = 3.47, sd = 1.34) scored significantly higher on clients' family as a source of stress, compared with those without such training (10/37; 27%: mean = 2.46; sd = 1.61) ($F = 4.113$; $df = 1$; $p = 0.05$). This effect is likely to be related to the fact that the qualified HIV workers were predominately ward-based and would come into contact with clients' families as part of routine visiting times.

There was also a significant correlation between MBI-depersonalisation scores and clients' family perceived as a source of stress. The greater the clients' families were perceived as a source of stress, the higher the depersonalisation scores were likely to be (41/45; 91%: $r = .362$; $p = .024$).

Clients' families were also perceived to be a greater source of stress by participants who had been in the HIV speciality 2-5 years (15/38; 39%: mean = 3.8), compared with those who had been in it for 6 years or more (14/38; 37%: mean = 2.9) or less than 2 years (9/38; 24%: mean = 2.2).

4.5.2c The multidisciplinary team

There were significant differences between participants' characteristics on perceiving the multidisciplinary team as a source of stress. Managers (17/45; 38%: mean = 4.57) viewed the multidisciplinary team to be a greater source of stress than non-managers did (28/45; 62%: mean = 3.26) ($F = 4.86$; $df = 1$; $p = 0.034$).

The paramedical professionals (7/41; 17%: mean = 5.6) found the multidisciplinary team to be a significantly greater source of stress than the nurses (25/41; mean = 3.04) and HIV workers did (9/41; 22%: mean = 3.7) ($F = 4.46$; $df = 2$; $p = .02$).

Participants from community-based HIV teams (18/45; 40%: mean = 5.17) perceived the multidisciplinary team to be significantly more stressful compared with the hospital-based HIV professionals (27/45; 06%: mean = 3.21) ($F = 7.1$; $p = .01$).

Participants with children (10/40; 75%: mean = 5.75) were significantly more likely to view the multidisciplinary team as a source of stress compared to those who did not have children (30/40; 75%: mean = 3.17) ($F = 15.57$; $p < 0.0001$).

There was also a significant correlation between GHQ-12 caseness scores and perceiving the multidisciplinary team as a source of stress ($r = .331$; $p = .037$). The higher participants rated the multidisciplinary team as a source of stress, the higher were the clinical caseness GHQ-12 scores. GHQ-caseness did not correlate with any of the other interpersonal sources of stress measures in this study. It may be that multidisciplinary team sources of stress impact in some way on GHQ-12 score but not on MBI burnout or PSS stress scales.

Length of time in service may be a factor related to perceiving the multidisciplinary team as a source of stress. In this study, ratings for the multidisciplinary team as a source of stress were significantly higher for HIV professionals who have been in the speciality for more than 6 years ($F = 10.41$; $df = 2$; $p < .0001$) compared with those who have been in it for less time. There was also a trend, as shown in Table 4.5.2ci for the mean scores to increase across time. The mean stress score for HIV professionals in the HIV speciality for less than 2 years was 2.1 (9/38; 24%: $sd = .92$); from 2-5 years it was 3.85 (15/38; 39%: $sd = 1.65$), and more than 5 years was 5 (14/38; $sd = 1.5$). Although this was not a longitudinal study, the findings may suggest that interpersonal relationships in a multidisciplinary context were perceived as more stressful over time.

Table 4.5.2ci Multidisciplinary team as a source of stress and time in HIV speciality

Time	n	Mean	sd	F = 10.41 p < .0001
under 2 years	9	2.1	0.9	
2-5 years	14	3.85	1.65	
6 years plus	14	5.0	1.56	

Participants who have been in the HIV speciality for more than 6 years were also significantly less likely to rate the multidisciplinary team as a source of practical support (37/45; 82%: $F = 4.53$; $df = 2$, $p = .018$), as shown in Table 4.5.2cii. The longer time the participants had been in the HIV speciality, the less likely they were to perceive the multidisciplinary team as a source of practical support.

Table 4.5.2cii Multidisciplinary team as a source of practical support and time in HIV speciality

Time	N	mean	Sd	F = 4.53 p = .018
under 2 years	9	4.2	1.71	
2-5 years	14	3.4	0.93	
6 years plus	14	2.6	1.15	

4.5.2d The manager

There were no significant differences between participants' characteristics on perceiving the manager as a source of stress except for women with children (no male participants reported having children). It was also found that participants with children (10/42; 24%: mean = 4.55) were significantly more likely to view their managers as a source of stress compared with those who do not have children (32/42; 76%: mean = 2.56) ($F = 6.131$; $p = 0.018$).

The manager was also viewed as a greater source of stress by HIV professionals who had been in the speciality for 6 or more years (14/38; 37%: mean = 4.4; $sd = 1.8$) in contrast to those in it for less than 2 years (9/38; 24%: mean = 2.5; $sd = 1.6$) or between 2-5 years (15/38; 39%: mean = 2.9; $sd = 1.6$) ($F = 4.09$; $df = 2$; $p = .025$).

There was also a significant negative correlation between getting practical support from the manager and perceiving the multidisciplinary team as a source of stress ($r = -.398$ $p = .016$), the manager as a source of stress ($r = -.609$; $p < .0001$) and the same profession colleagues as a source of stress ($r = -.372$; $p = .016$). Manager support would appear to be an important factor in reducing or buffering perceived stress from collegial relationships.

4.5.2e The same profession colleagues

There were no significant differences between participants' characteristics and perceiving same profession colleagues as a source of stress. There was no significant correlation between same profession colleague sources of stress and health outcome measures. Participants who have been in the HIV speciality for more than 6 years, however, were significantly less likely to rate the same profession colleagues as a source of emotional support (37/45; $F = 4.53$; $df = 2$, $p = .018$), as shown in Table 4.5.2e. The longer time the participants had been in the HIV speciality, the less likely they were to perceive the same profession colleagues a source of emotional of support

Table 4.5.2e Same profession colleagues as a source of emotional support and time in HIV speciality

Time	N	mean	Sd	F = 4.5 p = .01
under 2 years	9	4.2	1.7	
2-5 years	14	3.4	0.9	
6 years plus	13	2.6	1.1	

4.5.2f Family and friends

There were no significant differences between participants' characteristics on perceiving the participants' families and friends as a source of stress or support. There were also no significant correlations between family and friends sources of stress and health outcome measures.

4.5.2g Partner

There were no significant differences between participants' characteristics on perceiving the partner as a source of stress except for sexuality differences. Homosexual males (12/37; 32% mean = 1.67) scored significantly lower on viewing their partner as a source of stress compared to heterosexual participants (21/37; 32%: mean = 2.7), and lesbian participants (4/37; mean = 2.75) ($F = 3.738$; $df = 2$; $p = 0.024$). Homosexual males also scored significantly higher on perceiving the partner as a source of support (12/37; 32%: mean = 5.3; $sd = 1.57$) compared with lesbian participants (4/37; 11%: mean = 4.6) and heterosexual participants (21/37; 57%: mean = 4.0) ($F = 3.73$; $df = 2$; $p = 0.022$). Only one participant out of the 21 heterosexual participants was male and so it was not possible to analyse for differences within this group.

There was also a significant correlation between Perceived Stress Scale (PSS) scores and perceiving partner as a source of stress ($r = .397$; $p = .027$). The more the partner was perceived as a source of stress, the higher the PSS stress scores were

likely to be. Length of time with partner did not appear to be a factor and it was not possible to analyse for sexuality differences owing to small numbers.

Other interpersonal sources of stress did not significantly correlate with the PSS scores. Nor were there significant correlations between partner sources of stress and other health outcome measures. It is possible that partner sources of stress may impact in some way on PSS scores, but not on MBI burnout or GHQ-12 scores. The standard deviation for all sources of stress were below 3 and therefore high degree of variability would not account for this finding.

4.5.3 Summary of interpersonal relationships and occupational morbidity among HIV professionals

11/42 (26%) participants scored clinical caseness on the GHQ-12 and 33/45 (74%) had 1 or more days of sick leave in the 6 months prior to the study. Using the Maslach Burnout Inventory to assess stress and burnout suggested that this sample of participants had moderate to high levels of burnout across the dimensions. In particular 30/41 (73%) of the sample were in the moderate-high burnout category for personal accomplishment. 21/41 (51%) were in the moderate-high burnout category for emotional exhaustion. Depersonalisation was less evident with 13/41 (31%) of participants in the moderate-high burnout category for depersonalisation.

Qualified health professionals compared with non-qualified health professionals in this study had significantly lower stress scores on two of the published stress/health measures (GHQ-12 and PSS). Having a health care professional training and qualification may be an important 'buffering' factor for HIV professionals as they

encounter different stressful situations over time. A basic training in a health care field may give qualified HIV professionals more skills to cope with a variety of situations compared with non-qualified HIV professionals. Alternatively, there may have been a higher incidence of premorbid 'caseness' in the non-qualified participants.

In this study the main source of perceived stress for HIV professionals was from multidisciplinary team relationships. Client sources of stress were a close second, followed by manager and same profession colleague sources of stress. Partner and family/friends sources of stress were the least stressful for participants. Client and client's family sources of stress and length of time in the HIV speciality (2-5 years) were significant factors associated with depersonalisation. Emotional exhaustion and personal accomplishment scores were not found to correlate with the interpersonal sources of stress ratings in this study. GHQ-caseness was significantly correlated with perceiving the multidisciplinary team as a source of stress. The more stressful the multidisciplinary team was perceived to be, the more likely the participants were to be in the clinical caseness category on the GHQ-12. Women and women with children, particularly, tended to have higher GHQ-caseness scores compared with childless women and men. Perceived stress (PSS scores) was related to 'partner' sources of stress; the more stressful the relationship with the partner was, the higher the PSS stress scores were likely to be.

Multidisciplinary team sources of stress ratings were significantly higher for managers compared with non-managers, and for those participants with children compared with those who did not have children. Those HIV professionals who had

been in the HIV speciality for longer also rated the multidisciplinary team as more stressful.

Managers were more likely to be viewed as a source of stress by participants who had been in the HIV speciality for 6 or more years compared with those who have been in it for less time. Participants with children were also more likely to rate the manager as a source of stress compared with those without children.

Length of time in HIV speciality may be an important factor in determining participants' perceptions of sources of stress. There was a tendency for interpersonal relationships at work to be viewed as more stressful by those participants who had been in the HIV speciality for longer. There was also a significant correlation between length of time in HIV speciality and reduced self-efficacy. Participants who had been in the HIV speciality for longer, tended to have a lower self-efficacy. It was not evident why self-efficacy might reduce over time. Age, however, did not appear to be a factor.

4.6 Stressful work event and coping

4.6.1 Descriptive data about the most stressful event at work

In response to an open-ended question asking participants to describe 'the most stressful event at work in the previous month' the following categories of responses were elicited. 21/43 (49%) reported interpersonal problems with colleagues as the major source of stress in the previous month. 10/43 (23%) reported client related problems as the most stressful event in the previous month. 9/43 (21%) reported problems with

their manager/s as a major source of stress. 3/43 (7%) reported problems with clients' families as the major source of stress. Extracts from participants' responses can be found in appendix 2.

4.6.2 Perceived changeability of the problem

Perceived changeability of the problem was not significantly correlated with any of the health outcome or coping strategy scores. Perceived changeability of the problem was however, significantly negatively correlated with perceiving the multidisciplinary team ($r = -.39$; $p = .033$) and the manager ($r = -.418$; $p = .022$) as a source of stress. The less changeable the stressful problem at work was viewed to be, the more likely the multidisciplinary team and manager were viewed as a source of stress.

There was also a positive correlation between three coping methods and rating the multidisciplinary team as a source of stress. These were active coping ($r = .343$; $p = .038$); planning ($r = .398$; $p = .015$) and humour ($r = .372$; $p = .023$) for multidisciplinary sources of stress. Coincidentally, it was also found that there was a positive correlation between the same methods of coping and perceiving the manager as a source of stress. These were active coping ($r = .434$; $p = .006$); planning ($r = .399$; $p = .013$) and humour ($r = .445$; $p = .005$) for manager sources of stress. Coping responses more generally are detailed in the next section below.

4.6.3 Coping strategy selection

The sub-scores on the fifteen scales of the COPE questionnaire for the sample are given in Table 4.6.3 The only published norms available for the situational version

on the COPE questionnaire have been included for comparison, although they are for university students who are not an equivalent match. The norms for the HIV professional sample, however, are not dissimilar from those for the university students. The HIV participants in this study appeared to use religion less, vent emotions less and use more alcohol than the students to cope with stress.

Table 4.6.3 Coping methods for HIV professionals and university students

Coping methods	Mean scores for HIV professionals n = 38	Published norms for university graduates n = 117
Active coping	10.6	10.69
Planning	10.9	11.86
Instrumental support	10.1	9.69
Emotional support	11.4	11.
Suppression of competing activities	8.4	9.3
Religion	4.8	7.6
Positive reinterpretation	10.5	11.35
Restraint coping	8.8	9.4
Accepting	10.9	11.49
Venting emotions	9	10.37
Denial	6	5.57
Mental disengagement	8	8
Behavioural disengagement	5.6	6
Alcohol/drugs	7	5.16
Humour	8	Missing

4.6.4 Congruent versus non-congruent copers

Participants who adopted predominately emotion focused coping strategies for an unchangeable (perceived) problem and problem focused coping strategies for a changeable (perceived) problem, were categorised as 'congruent copers'.

Participants who adopted predominately emotion focused coping strategies for a changeable (perceived) problem and problem focused coping strategies for an unchangeable (perceived) problem, were categorised as 'non-congruent copers'. There were no significant differences between congruent (10/17; 59%) and non-congruent copers (7/17; 41%) on any of the health outcome measures, sources of stress, sources of support and coping strategy selection except for use of alcohol as a coping strategy and partner support.

Non-congruent copers (7/17; 41%; mean = 11.8; sd = 3.24) were significantly more likely to use alcohol as a coping method compared with congruent copers (10/17; 59%; mean = 6.3; sd = 5.25) ($F = 6.134$; $df = 1$; $p = .026$). Congruent copers (10/17; 59%.) perceived their partners to be a greater source of emotional support on two Significant Other Scales (trust and share with; mean = 5.8; sd = 1.25: lean on /turn to; mean = 6; sd = 1.25) compared with non-congruent copers (7/17; 41%: trust and share with; mean = 3.3; sd = 1.25: lean on/turn to; mean = 4; sd = 2.28) ($F = 5.24$; $df = 1$; $p = .038$; $F = 5.25$; $df = 1$; $p = .038$).

4.6.5 Summary of stressful problems at work and coping

Contrary to prediction, congruent copers were not found to have significantly improved health measures (PSS, MBI, GHQ-12) or self-efficacy scores (GSE) compared with non-congruent copers. The numbers for this analysis were small which may have masked effects. Non-congruent copers however, were found to be significantly more likely to use alcohol as a coping method compared with congruent copers. As non-congruent coping may instil a sense of 'helplessness and hopelessness' in the participant, because of the mismatch between problem and

coping strategy selection, it might make sense that an emotion focused strategy such as alcohol was used to cope with a seemingly 'insoluble problem'. It was also found that participants who tended to adopt active coping, planning and humour as methods for coping with the stressful event at work scored significantly higher on both the multidisciplinary team and the manager sources of stress scales.

4.7 Comparison of team differences

There were three teams with more than 5 participants; the voluntary sector team (9/45; 20%), the community sector team (9/45; 20%) and the hospital-based nurse team (22/45; 49%). All three of these teams' data were used for exploring team differences. The HIV management team (5/45; 11%) data was not included, however, because of the greater variance from a small number of participants.

4.7.1 Team differences in health outcome

There were no significant team differences on health outcome scores except on the MBI-emotional exhaustion scale and the Perceived Stress Scale. The voluntary sector team (9/41; 22%; mean = 24.67) scored significantly higher than the community (9/41; 22%; mean = 16.35) or hospital-based (23/41; 56%; mean = 16.12) HIV teams on the MBI-emotional exhaustion scale ($F = 3.44$; $df = 2$; $p = 0.044$). The Voluntary sector team (mean = 29.23) scored significantly higher than the community (mean = 21.3) or hospital-based (mean = 18.87) HIV teams on the Perceived Stress Scale ($F = 4.18$; $df = 2$; $p = 0.024$).

4.7.2 Team differences in perceptions of sources of stress

The community HIV team (9/45; 20%; mean = 5.16) scored significantly higher than the ward based (22/45; 49%; mean = 3.04) or voluntary sector (9/45; 20%; mean = 3.87) HIV teams on perceiving the multidisciplinary team to be a source of stress ($F = 3.455$; $p = 0.044$).

4.7.3 Perceptions of stress and HIV team locality differences

In this sample, participants who were community based (18/45; mean = 5.17) were significantly more likely to view their multidisciplinary team as a source of stress compared to hospital-based participants (27/45; mean = 3.21) ($F = 7.100$; $df = 1$; $p = 0.013$).

4.7.4 Team differences in sources of support

There were no differences in sources of support for the different teams.

4.7.5 Team differences in coping style

There were no significant differences in coping style for the different teams.

4.8 Relationship between health outcome measures

There was a highly significant correlation between the MBI-emotional exhaustion measures and the General Health Questionnaire measures using the likert method of scoring the GHQ-12 ($r = .52$; $p < .0001$) and the caseness method ($r = .49$; $p = .001$). There was also a highly significant correlation between the MBI-emotional exhaustion measures and the Perceived Stress scale measures ($r = .56$; $p < .0001$).

There was a significant negative correlation between the MBI-personal accomplishment scale and the GHQ-12 (caseness) scores ($r = -.34$; $p = .031$) but not the GHQ-12 (likert) scores ($r = -.20$; $p = .21$).

4.9 Reliability and validity

4.9.1 Published psychometric health measures

The reliability and validity of the published health questionnaires used in this study have acceptable reliability and validity data (Johnston, Wright & Weinmann, 1995; Maslach & Jackson, 1986). The questionnaires were administered as directed by the publishers in order to preserve the reliability and validity of the data obtained. They were also collected anonymously to increase the possibility of honest reporting and therefore the validity of the data. It was considered that two items might be particularly sensitive to distortion from memory bias. These were i) sick leave rate

and ii) record of stressful work event. These items' data were interpreted with particular caution.

4.9.2 Perceived Stress Scale internal reliability

The internal reliability was assessed for the Perceived Stress Scale in this study (43/45; 96%: 14 items; $\alpha = .738$) and accepted as reasonable.

4.9.3 GHQ-12 internal reliability

The internal reliability was assessed for the GHQ-12 scale in this study (43/45; 96%: 12 items; $\alpha = .876$) which was considered acceptable.

4.9.4 Generalised Self-Efficacy scale internal reliability

The internal reliability was assessed for the Generalised Self-efficacy scale in this study (39/45; 87%: 10 items; $\alpha = .816$) which was considered acceptable.

4.9.5 Significant Others Scale internal reliability

The internal reliability was assessed for the Significant Others Scale in this study and was considered acceptable (39/45; 87%: 52 items; $\alpha = .866$).

4.9.6 COPE scale internal reliability

The internal reliability was assessed for the fifteen COPE scales in this study (38/45; 84%: 4 items per scale). The alpha scores are detailed in Table 4.9.6 and were acceptable except for 'denial'.

Table 4.9.6 COPE Chronbach alpha reliability scores of each of the fifteen sub-scales (4 items each scale)

Coping methods	Alpha score 38/45
Active coping	.768
Planning	.777
Instrumental support	.608
Emotional support	.765
Suppression of competing activities	.662
Religion	.91
Positive reinterpretation	.72
Restraint coping	.458
Accepting	.672
Venting emotions	.504
Denial	-.021
Mental disengagement	.356
Behavioural disengagement	.65
Alcohol/drugs	.943
Humour	.93

4.9.7 Sources of stress scale

The internal reliability for the sources of stress items was assessed (32/45; 71%: 7 items; alpha = .57). Although the alpha score was lower than desirable, it was considered that this may be owing to the small number of items used and lack of development of a scale at the time of the study. The sources of stress items have

since been increased to 25 sources of stress and administered as a Sources of Stress Scale by the author to a sample of 60 employees in the corporate sector. This yielded an alpha score of 8.7. The scale still requires refinement and piloting before being acceptable for wider use and publication.

4.10 Relationship between interpersonal sources of stress and support

Previous research findings have shown that social support generally and support from partner, manager and colleagues specifically, may buffer the effects of stress. It was therefore predicted that there would be a significant relationship (negative correlation) between sources of support, as measured by the Significant Others Scale, and sources of stress. Each source of support and source of stress correlation was analysed using the Pearson product correlation coefficient. The probability and correlation matrices (5 by 4 cells) are presented in the next sub-sections.

The SOS questionnaire also asks participants to rate ideal as well as actual levels of support they were receiving from each person listed. The discrepancy between the actual and ideal support ratings for each source of support was calculated (discrepancy score) and correlated with each source of stress score (Power, 1997). It was predicted that the greater the discrepancy (wanting more support), the higher the participants would tend to rate the sources of stress. The results from the correlation matrices (5 by 4 cells) for interpersonal sources of stress and wanting more support from significant others are also presented.

4.10.1 Partner support

It was predicted that partner support would be significantly related to decreased sources of stress. There was a negative correlation between the partner as source of stress scores and as a source of support scores on three SOS scales (trust and share; to lean on; to socialise with) ($r = -.697$; $p < .0001$, $r = -.626$; $p < .001$; $r = -.556$; $p = .002$). Increased emotional and social support from the partner would appear to be related to a decrease in partner sources of stress. Partner support, however, did not significantly correlate with other interpersonal sources of stress (see Table 4.10.1i).

Table 4.10.1i Partner support and sources of stress

(n = 41)

SOS scales - partner

Source of stress	trust & share with	lean on/ turn to	practical support	socialise with
Client				
Client's family				
Multidisciplinary team				
Manager				
Same profession colleagues				
Partner	$r = -.697$ $p < .0001$	$r = -.626$ $p < .0001$		$r = -.556$ $p = .002$
Family & friends				

The discrepancy between ideal and actual support from the partner was calculated for each of the SOS items and then correlated with sources of stress scores. It was hypothesised that the greater the discrepancy, the higher participants would tend to rate the sources of stress. There was a significant correlation between wanting more

emotional support from the partner (trust & share; to lean on) and perceiving the partner as a source of stress ($r = .741$; $p < .0001$: $r = .617$; $p = .001$). The greater the discrepancy between ideal and actual emotional support from the partner, the higher participants tended to rate the partner as sources of stress (see Table 4.10.1 ii).

Table 4.10.1ii Wanting more support from partner and sources of stress

(n = 29)

SOS scales - partner

Source of stress	trust & share	lean on/ turn to	Practical	socialise
Client				
Client's family				
Multidisciplinary team				
Manager				
Same profession colleagues				
Partner	$r = .741$ $p < .0001$	$r = .617$ $p = .001$		
Family & friends				

4.10.2 Multidisciplinary team support

In this study, it was predicted that multidisciplinary team support would be significantly related to decreased sources of stress. There was a negative correlation between the multidisciplinary team being rated as a source of stress and the multidisciplinary team being viewed as a source of support (trust & share with; socialise with)($r = -.491$; $p = .002$: $r = -.495$; $p = .002$) as shown in Table 4.10.2i. The more emotional and social support the multidisciplinary team provided, the less the multidisciplinary team was rated as a source of stress.

Table 4.10.2i Sources of stress and multidisciplinary team support

(n = 39)

SOS scales multidisciplinary team

Source of stress	trust & share	lean on /turn to	practical support	socialise with
Client				
Client's family				
Multidisciplinary team	r = -.491 p = .002			r = -.495 p = .002
Manager				
Same profession colleagues				
Partner				
Family & friends				

The discrepancy between ideal and actual support from the multidisciplinary team was calculated for each of the SOS items and correlated with each source of stress. It was hypothesised that the greater the discrepancy, the higher participants would tend to rate the sources of stress. There was a positive correlation between wanting more emotional support from the multidisciplinary team (trust & share; to lean on/turn to) and viewing the multidisciplinary team as a source of stress ($r = .459$; $p = .003$; $r = .402$; $p = .012$). The greater the discrepancy between ideal and actual emotional support, the higher the multidisciplinary team was rated as a source of stress.

There was also a series of negative correlations between wanting more support from the multidisciplinary team and sources of stress. Specifically there was a negative correlation between wanting more support from the multidisciplinary team on three SOS scales and viewing family and friends as a source of stress (trust & share with ; $r = -.339$; $p = .001$: lean on/turn to; $r = -.491$; $p = .001$: practical support; $r = -.339$;

$p = .035$). The greater the discrepancy between actual and ideal support from the multidisciplinary team, the less family and friends were rated as a source of stress. There was also a negative correlation between wanting more social support from the multidisciplinary team and viewing the client as a source of stress ($r = -.378$; $p = .019$) and the same profession colleagues as a source of stress ($r = -.352$; $p = .03$). The greater the discrepancy between actual and ideal support from the multidisciplinary team, the less stressful clients and same profession colleagues were rated to be (see Table 4.10.2ii).

Table 4.10.2ii Wanting more support from multidisciplinary team and sources of stress

($n = 39$) SOS scales: wanting more support from multidisciplinary team

Source of stress	trust & share	lean on	practical	socialise
Client				$r = -.378$ $p = .019$
Client's family				
Multidisciplinary team	$r = .459$ $p = .003$	$r = .402$ $p = .012$		
Manager				
Same profession colleagues				$r = -.352$ $p = .03$
Partner				
Family & friends	$r = -.339$ $p = .032$	$r = -.491$ $p = .001$	$r = -.339$ $p = .035$	

The relevance of the negative correlation for these results is ambiguous. It may reflect, however, an indirect effect of greater stress from family, friends, colleagues and same profession colleagues on reducing the perceived need for more support from the multidisciplinary team. Alternatively it may reflect the effect of greater perceived need for support from multidisciplinary team on reducing perceptions of family, friends, same profession colleagues and clients as a source of stress.

Focusing on the inadequacies of multidisciplinary team may 'protect' the individual from perceiving other sources of interpersonal stress.

4.10.3 Manager support

It was predicted that manager support would be significantly related to decreased sources of stress based on previous research findings. There was a negative correlation between viewing the manager as source of stress and as a source of support on all four SOS scales ($r = -.479$; $r = -.522$; $r = -.606$; $r = -.440$ (all $p < .005$). Increased emotional, practical and social support from the manager would appear to be related to lower ratings of the manager as a source of stress.

There was a negative correlation between getting practical support from the manager and perceiving the multidisciplinary team as a source of stress ($r = -.398$; $p = .016$), the manager as a source of stress ($r = -.609$; $p = .000$) and the same professional colleagues as a source of stress ($r = -.372$; $p = .016$).

There was a negative correlation between the multidisciplinary team being viewed as a source of stress and the manager being viewed as a source of practical support ($r = -.364$; $p = .011$) and social support ($r = -.364$; $p = .021$). The more practical and social support the manager provided, the less the multidisciplinary team was viewed to be a source of stress.

There was a negative correlation between viewing the same profession colleagues as a source of stress and the manager as a source of practical support ($r = -.372$;

p = .016). Practical support from the manager would appear to be important to reduce perceptions of interpersonal sources of stress from colleagues at work. The above results are summarised in the correlation matrix table (see Table 4.10.3i).

Table 4.10.3i Sources of stress and manager support

(n = 41)

SOS scales - manager

Source of stress	trust & share	lean on/turn to	Practical Support	socialise with
Client				
Client's family				
Multidisciplinary team	r = -.398 p = .011	r = -.364 p = .021		
Manager	r = -.479 p = .002	r = -.522 p < .0001	r = -.609 p < .0001	r = -.440 p = .004
Same profession colleagues			r = -.372 p = .016	
Partner				
Family & friends				

The discrepancy between ideal and actual support from the manager was calculated for each of the SOS items and correlated with each source of stress. It was hypothesised that the greater the discrepancy, the higher participants would tend to rate the sources of stress. There was a significant correlation between discrepancy scores and manager source of stress scores on three SOS scales. The greater the discrepancy between ideal and actual support (trust & share, lean on/turn to and practical support) the higher participants tended to rate the manager as a source of stress (r = .502; p = .001; r = .526; p < .0001; r = .627; p < .0001).

There was a significant correlation between discrepancy scores for practical support from the manager and rating the multidisciplinary team as a source of stress

($r = .348$; $p = .028$). There was also a significant correlation between discrepancy scores for practical support from the manager scores and the same profession colleagues as a source of stress scores ($r = .359$; $p = .021$). The greater the discrepancy between actual and ideal practical support from the manager, the higher the multidisciplinary team and same professional colleagues were rated as a source of stress. These results are summarised in Table 4.10.3ii.

Table 4.10.3ii Sources of stress and manager support

($n = 41$)

Wanting more support from the manager SOS scale

Source of stress	trust & share	lean on/ turn to	Practical Support	Socialise With
Client				
Client's family				
Multidisciplinary team			$r = .348$ $p = .028$	
Manager	$r = .502$ $p = .001$	$r = .526$ $p < .0001$	$r = .627$ $p < .0001$	
Same profession colleagues			$r = .359$ $p = .016$	
Partner				
Family & friends				

4.10.4 Same profession colleague support

It was predicted that same profession colleague support would be significantly related to decreased sources of stress scores. There was a negative correlation between the same profession colleagues being viewed as a source of support on all four SOS scales and the multidisciplinary team being viewed as a source of stress (trust & share; $r = -.389$; $p = .016$; turn to/lean on; $r = -.380$; $p = .019$; practical support; $r = -.498$; $p = .001$; social support; $r = -.423$; $p = .008$). The more practical, emotional and social support participants had from same profession colleagues, the

lower they tended to rate the multidisciplinary team as a source of stress. There was also a negative correlation between the same profession colleagues being viewed as a source of practical support and the manager being seen as source of stress ($r = -.368$; $p = .021$) as shown in Table 4.10.4i.

Table 4.10.4i Sources of stress and support from same profession colleagues

($n = 39$)

SOS scales - same profession colleagues

Source of stress	trust & share	lean on	Practical	Socialise
Client				
Client's family				
Multidisciplinary team	$r = -.389$ $p = .016$	$r = -.380$ $p = .019$	$r = -.498$ $p = .001$	$r = -.423$ $p = .009$
Manager				
Same profession colleagues			$r = -.368$ $p = .021$	
Partner				
Family & friends				

There was a positive correlation between wanting more support (trust and share with; practical support) from the same profession colleagues and seeing the multidisciplinary team as a source of stress ($r = .332$; $p = .042$; $r = .385$; $p = .017$) as shown in Table 4.10.4ii

Table 4.10.4ii Wanting more support from same profession colleagues

(n = 39) SOS scales - wanting more support from same profession colleagues

Source of stress	trust & share	lean on	Practical	Socialise
Client				
Client's family				
Multidisciplinary team	r = .332 p = .042		r = .385 p = .017	
Manager				
Same profession colleagues				
Partner				
Family & friends				

4.10.5 Summary of the relationship between sources of stress and support

In this study it was found that support from the manager, same profession colleagues and the multidisciplinary team were all associated with reduced sources of stress. Support from family and friends did not appear to be influential.

Partner support was significant, but only in relation to perceptions of the partner as a source of stress. Increased partner support was directly related to decreased partner sources of stress. Similarly, a greater discrepancy between actual and ideal partner support was directly related to perceiving the partner as a greater source of stress. Partner support was not associated with reduced perceptions of stress from work-based relationships.

Higher levels of perceived support from the multidisciplinary team was likewise associated with reduced perceptions of stress from multidisciplinary team sources.

There was no relationship found between multidisciplinary team support and other interpersonal sources of stress.

The discrepancy between actual and ideal multidisciplinary team support and relationship with sources of stress, however, was less clear. Although the greater the discrepancy was between actual and ideal support from the multidisciplinary team, the more the multidisciplinary team was rated as a source of stress; this was the opposite for client, same profession colleagues and family and friends sources of stress. The greater the discrepancy, the less the client, same profession colleagues and family and friends were viewed as a source of stress. This inverse relationship between wanting more support from the multidisciplinary team and viewing non-multidisciplinary team relationships as less stressful is a curious result, but one that can be explained from observing the HIV teams who took part in this study.

From observation and discussion with participants, it was evident that within the HIV services, there were numerous sub-teams, some which ally together with the relative exclusion of other sub-teams. Over time, these alliances break and new alliances are made. In one HIV team for example, there was conflict between sub-teams who together, formed the larger community HIV team. When in conflict with the acute service, however, the community sub-teams allied and the acute service became the excluded 'third party'. The third party is often 'scape-goated' and the conflict is frequently related to distribution of 'power' within the service.

Another observation from individual consultation with participants was that they tended to report supportive working relationships and poorer home relationships; or supportive home relationships and poorer work relationships. Observing trends in

the SOS scales raw data also supported the view that supportive home life relationships rarely coincided with supportive work-relationships and vice-versa. It appeared that participants who were having difficulties in their personal home life relationships tended to use work colleagues for support and participants who were having difficulties with work-based relationships tended to use home relationships for support. Likewise, within work-based relationships there was a similar trend to seek support from one source, usually the least stressful source (e.g., manager, multidisciplinary team or same profession colleagues) about difficulties experienced from another interpersonal source of stress at work. Thus it might follow that the greater the stress is from one or more sources of stress at work, the more supportive another source of support at work will 'appear' to be. This explanation could account for the finding, for example, that the greater the discrepancy between actual and ideal support from the multidisciplinary team, the less stressful other interpersonal sources were viewed to be.

Manager support also appeared to be related to reduced perceptions of stress from other collegial sources. The more the manager was perceived as a source of support, the less the manager, multidisciplinary team and same profession colleagues were viewed as a source of stress. There was also a relationship between wanting more practical support from the manager and increased perceptions of stress from the manager, multidisciplinary team and same professional colleagues.

Support from same profession colleagues was strongly related to reducing perceptions of stress from multidisciplinary team sources. Similarly the more that was wanted from the same profession colleagues, the more likely the multidisciplinary team was viewed as a source of stress.

In conclusion then, the **relativity** of relationships, being perceived as both stressful and supportive and in relation to one another, may be being reflected in the results of the analyses. The categories of manager, same profession colleagues and multidisciplinary team were presented to participants as discrete and not overlapping staff groups in order to avoid significant correlations based on confounding staff groups. The qualitative data supported the empirical analyses and error or chance could not easily account for the significant results. The number of participants in the analyses was small, however, which could distort results. The results in this study are not generalisable to other HIV worker groups but rather are descriptive of the teams used in this study.

4.11 Qualitative analysis of MBTI personality data and stress in teams

The MBTI personality questionnaire was used to assess individual and team personality type (Myers, 1962). The MBTI yields a 'reported' type and feedback with participants enables them to select their 'best-fit' type. Both these data are useful. The best-fit type is used to assess participants' innate personality preferences. The reported type may be different from the best-fit type, which may suggest that the individual is not behaving according to his/her type preferences, but rather to the demands of the job and work environment. It is likely that where there is congruency between reported type and best-fit type, those individuals will feel most comfortable. The greater the differences between reported and best-fit type, the greater they are likely to experience a discordance with themselves and others because they are not behaving in accordance with their preferred personality type. Individuals who are under prolonged or high levels of stress may also have a different reported type because they are using underdeveloped preferences (inferior function) under stress (Quenk, 1996).

There are 16 basic personality types derived from 4 dichotomous scales. Each dichotomous scale has 2 functions. The functions for the four scales are;

Extroversion-Introversion (E-I)

Sensing-Intuition (S-N)

Thinking-Feeling (T-F)

Judging-Perceiving (J-P)

Extroversion-Introversion (E-I): This scale assesses whether the individual is energised and motivated from within himself through thoughts and reflection (I) or from talking out ideas and being with others (E).

Sensing-Intuition (S-N): This scale assesses whether the individual likes to take in information in a practical way using his senses to focus on facts and details (S), or in a more theoretical or abstract way, focusing on the possibilities and connecting themes and patterns (N).

Thinking-Feeling (T-F): This scale assesses whether the individual likes to make decisions in an objective, somewhat detached way using logical reasoning (T), or makes decisions based on his own personal values and subjective view of how people may feel (F).

Judging-Perceiving (J-P): This scale assesses whether the individual orientates himself toward activities in a planned and structured, step-by step way with closure (J), or prefers a more spontaneous and flexible open-ended approach (P).

The sixteen personality types are identified by a four-letter code. Each letter represents the preferred function the participant was assessed to have. Although individuals use all 8 functions to a greater or lesser extent, the MBTI is designed to identify the more natural, innate preference for each pair of functions (E or I; N or S; T or F; J or P).

The combination of the 4 preferred functions gives each individual a 'type', for example ENTP, ISTJ and ISFP. There are 16 possible types in total. The four-letter code can be translated into a behavioural summary of the individual's personality type (see appendix 3). The interaction between the functions (type dynamics) and the individual's previous experiences account for individual differences and variations in personality and behaviour, within a type classification. In this study, three teams (23 participants) completed the MBTI personality questionnaire. The ward-based team was unavailable for assessment. The personality type distribution for participants is shown in the Table 4.11.i. (reported type) and Table 4.11.ii (best-fit type).

Table 4.11.i Type Table of reported type for participants

	Sensing(S) 3/23		Intuitive (N) 20/23	
Introverts (I) 14/23	ISTJ 1	ISFJ	INFJ	INTJ 8
	ISTP	ISFP 1	INFP 1	INTP 3
Extroverts (E) 10/23	ESTP 1	ESFP	ENFP 2	ENTP 3
	ESTJ	ESFJ	ENFJ 2	ENTJ 2

Reported personality type: The frequency of participants in each reported type category shows a bias toward intuitive-thinking (NT) types (16/23; 70%). There were 14/23 (61%) participants who had a preference for introversion (I) compared to 10/23 (44%) who had a preference for extroversion (E). 20/23 (87%) participants

had reported preferences for intuition (N) compared to 3/23 (13%) who had a preference for sensing (S). 18/23 (78%) participants had a preference for thinking (T) compared with 5/23 (22%) who had a preference for feeling (F). 11/23 (48%) participants had a preference for perceiving (P) compared with 13/23 (57%) who had preference for judging (J) as shown in Table 4.11.i.

Best-fit personality type: Analysis of the best-fit personality type distribution also showed a bias toward intuitive (NT) types (10/23; 43%). 18/23 (78%) participants indicated preferences for intuition (N) compared with 5/23 (22%) who had a preference for sensing (S). 13/23 (57%) participants had a preference for thinking (T) compared with 10/23 (43%) who had a preference for feeling (F). There were 11/23 (48%) participants who had a preference for introversion (I) compared to 12/23 (52%) who had a preference for extroversion (E). 13/23 (57%) participants had a preference for perceiving (P) compared to 10/23 (43%) who had a preference for judging (J) as shown in Table 4.11.ii.

Table 4.11.ii Type Table of best-fit type for participants

	Sensing (S) 5/23		Intuitive 18/23	
Introverts 11/23	ISTJ 2	ISFJ 1	INFJ 1	INTJ 2
	ISTP	ISFP 1	INFP 2	INTP 2
Extroverts 12/23	ESTP	ESFP	ENFP 5	ENTP 3
	ESTJ 1	ESFJ	ENFJ	ENTJ 3

4.11.1 Personality functions (functional pairs)

Given the relatively small number of participants, functional pair classification has also been used in the analyses. Each functional pair classification is based on the sensing-intuition (S-N) and thinking-feeling (T-F) best-fit functions (i.e., NT, NF, ST, SF). Each functional pair can be described in behavioural terms (Hirsh & Kummerow, 1989; 1990). These are;

- NT** Focus on possibilities and are adept at developing theoretical and abstract concepts. They use an objective analysis of possibilities to inform their decision making and problem solving.
- NF** Focus on possibilities and can understand the aspirations of people. They are often good at communicating and understanding others. They tend to use insight and implications for others when solving problems and decision making.
- ST** Focus attention on facts and details. They solve problems and make decisions in a step-by-step, detached and objective manner. They are adept at applying a practical approach.
- SF** Focus on facts and details. They use a personal approach to making decisions and problem solve in a step-by-step, practical way. They are often adept at meeting the daily concerns of people.

As was apparent from the type tables for best-fit type, 10/23 (43%) participants had preferences for NT intuition-thinking. 8/23 (35%) had preferences for NF intuition-feeling. 2/23 (9%) participants had a preference for sensing-feeling (SF) and 3/23 (13%) had a preference for sensing-thinking. The functional pair distribution for participants are set out below in Table 4.11.1

Table 4.11.1 Personality type functional pair distribution across teams

Personality type functional pairs				
Teams	NT	NF	SF	ST
Voluntary	4	3	0	2
Community	6	3	0	0
Management	0	2	2	1
Total	10	8	2	3

The number of participants in the ST and SF cells was too small for X^2 analysis. There was however, a much larger proportion of NF/NT (18/23; 78%: intuitive-feeling; intuitive thinking) types compared to SF/ST (5/23; 22%: sensing-feeling; sensing-thinking) types. The main difference for this sample was the number of participants (18/23; 87%) with an intuition (N) preference compared to the number of participants (5/23; 22%) with a sensing preference (S). Larger numbers of participants may have given a more equivalent distribution, but the imbalance may also represent a type and occupation 'fit'. The MBTI is used for careers counselling and research has been conducted studying professions and personality types. To have 20/23 (87%) of participants with a preference for intuition (N) reported type and 18/23 (78%) of participants with a preference for intuition (N) best-fit type is much higher than would be expected for the general population or health

professionals. Both the general population and medical health care professionals (nurses and doctors) have been assessed, from large sample populations, to have a greater proportion of people with a sensing (S) preference compared to an intuitive (N) preference (Hammer, 1996). It is possible that the people with an intuitive preference may be attracted to the 'soft-science' psychosocial aspects of health care where theories abound but there is little in the way of hard facts. There is a preponderance of NF types in psychosocial and mental health service professionals (Hammer, 1996). This sample was predominately involved in psychosocial care rather than medical care of clients with HIV. 3/5 participants who had a sensing (S) preference in this study were nurses; the other 2/5 participants who had a sensing (S) preference had administrative/financial roles.

Prediction 1: People with a preference for intuition (N), based on type and personality research, tend to focus on conceptual links and possibilities rather than the facts and details of the matter. Intuitive people are often creative and enjoy start-up projects and innovative working practice. HIV service development may attract intuitive types because of the need historically and now, to develop groundbreaking services. The scope to be creative may be narrowing and this may provide a source of frustration for some HIV professionals with an intuitive (N) preference.

Observation and interview evidence: Almost 50% of the participants in this study would have commenced their career in the 1980s when the need for people to apply their creativity and vision to service development was at a peak. Many of the

intuitive (N) participants in this study are still involved in HIV service development and those who were not, felt 'frustrated' and 'stuck'. They acknowledged their 'need to be in a work environment which captured their creative tendencies' and 'not constrain them with structure and routine.'

Predication: 2 The sensing (S) participants, based on type and personality research, would be more likely to be involved in day-to-day project management, analysis of data and practical tasks. They are often practically minded and enjoy hands-on work or administrative roles, which involve the facts and details of the matter.

Observation and interview evidence: The sensing (S) participants in this study were, in fact, nurses or administrative/financial personnel involved in the day-to-day facts and details of the job rather than in conceptual and creative development roles. The participants with a sensing (S) preference identified the practical and 'hands-on' nature of their work and the systematic and logical way in which they tend to analyse information and build up to the 'big-picture'.

4.11.2 Stress and 'shift' in personality type

In this study, the 'shift' between reported and best-fit personality type was of interest because of the potential influence the environment may have on peoples' reported type. The manager, the team and the occupational environment may all influence the individual in reporting their innate personality type as measured by the MBTI. Individuals who are not performing to type mean that they are not using their preferred functions. This may be related to fitting in with the culture or influential demands of others. These individuals may feel more stressed because they are not using their natural preferences or feel a 'misfit'; or they may have developed their non-preferred ways of doing things to fit in and lost sight of their natural preferences and abilities.

It was hypothesised that under prolonged stress, participants with a best-fit preference for feeling (F) might shift to a reported preference for thinking (T). This was based on research evidence suggesting that there may be a tendency for best-fit extroverted, intuitive, feeling (ENF) types to be have a reported introverted, sensing, thinking (IST) type; either because the effects of stress make people more introverted, sensing and thinking, or because introverted, sensing, thinking is protective (Hammer, 1996; Quenk, 1998). Table 4.11.2 shows the reported and best-fit personality type distribution for three teams who completed the MBTI personality questionnaire.

Table 4.11.2 Reported and best-fit type for each team

Team	Reported type	Best Fit type
Voluntary	INTJ	ESTJ♦
	INTJ	ISTJ
	INTP	ENTP♦
	INTJ	ENTJ♦
	ENTJ	ENTJ*
	ENFJ	ENFJ
	INTJ	ENFP‡♦
	INTJ	INTJ
	INTJ	ENFP‡♦

Team	Reported type	Best-fit type
Community	ENFP	ENFP*
	ENTP	ENTP
	INTP	INTP
	ENFP	ENFP*
	ENTJ	ENTJ
	ESTP	INFP‡☒
	INTP	INTP*
	INTJ	INTJ
	ENFJ	ENFJ

Team	Reported type	Best-fit type
Management	ENTP	ENFP*‡
	ISFP	ISFP*
	ISTJ	ISFJ‡
	INFP	INFP
	ISTJ	ISTJ

- * = Manager role within the team
- ‡ = shift from F to T
- ♦ = shift from E to I
- ☒ = shift from N to S

Shift from feeling (F) to thinking (T)

It was predicted that individuals who had a best fit feeling (F) preference might shift to a thinking (T) preference for reported type under prolonged stress. That is they would shift from an innate preference for making decisions and problem solving in a personal values and subjective way (F) to becoming more detached, objective and impersonal in their interpersonal style, decision making and problem solving (T).

There were too few participants who had a shift from thinking (T) to feeling (F) for statistical analysis of health outcome differences. There were 5/23 (22%) who shifted innate preference from feeling (F) to thinking (T) reported preference and none who shifted from thinking (T) to feeling (F). Individual analysis of the five individuals who shifted from a best-fit feeling (F) preference to a reported thinking (T) preference showed the following.

Participant 1:(Reported ENTP: Best-fit ENFP) This participant had low MBI burnout scores and a GHQ-12 score of 0. He had recently returned, however from a year of leave (six months prior to the study) because of occupational stress and burnout. The source of stress he identified was exclusively from colleagues within the same profession team. He also said that he had found impartial decision making difficult, and had perhaps not been as objective as he should. This he felt was a major contribution to his burnout. The T-F shift for this participant might reflect a conscious effort on his part to develop his thinking (T) preference for decision making.

Participant 2: (Reported ESTP; Best-fit INFP) This participant had moderate levels of burnout on the MBI emotional exhaustion and personal accomplishment scales. She had a low burnout score for depersonalisation. She had a GHQ caseness score of 4 and a PSS score of 21 and GSE of 32. She self-reported feeling stressed and demoralised by collegial relationships, particularly within the same profession team. Clients and personal relationships were not stressful.

Participant 3: (Reported INTJ; Best-fit ENFP) This participant had moderate burnout on MBI emotional exhaustion and MBI personal accomplishment and low burnout on MBI depersonalisation. She had a GHQ-12 caseness score of 3 and PSS score of 21 and a GSE score of 33. Participant 3 identified collegial relationships and clients as a major source of her stress.

Participant 4: (Reported ISTJ; Best-fit ISFJ) This participant had moderate burnout scores on the MBI emotional exhaustion, depersonalisation and personal accomplishment scales and a clinical caseness GHQ-12 score of 3. PSS score was 23 and GSE was 34. He was a new member of staff and was finding 'settling into the team to be stressful' because it was divided by history and he 'did not belong to either group'. He also was finding the client work to be stressful as well as taking on a new management role.

Participant 5: (Reported INTJ; Best-fit ENFP) This participant scored high burnout on the MBI emotional exhaustion and depersonalisation score but low burnout on

the personal accomplishment scale. She had a GHQ-12 of 0, PSS score of 30 and GSE of 22. She described clients and clients' families as a major source of stress.

The trend of having a natural feeling (F) preference but a reported thinking (T) preference for individuals who had endured, or were currently enduring, occupational stress and burnout was in keeping with the hypothesis that thinking (T) may be related to higher levels of stress for people with an innate feeling (F) preference for these five participants.

Shift from extroversion (E) to introversion (I)

It was predicted that individuals who had a best-fit extroversion (E) preference might shift to an introversion (I) preference for reported type under prolonged stress. There were 5 participants who shifted from extroverted (E) to introverted (I) preference and all of these were in the voluntary team. The voluntary team scored significantly higher on the MBI emotional exhaustion sub-scale and Perceived Stress Scale (p 111) compared with the community and ward-based teams. Individual analysis showed the following profile of health outcome scores for each participant who shifted from extroversion to introversion.

Participant 1: (Reported INTJ; Best-fit ESTJ) This participant scored high burnout on the MBI emotional exhaustion and personal accomplishment scales and low on the depersonalisation scale. She had a high PSS score of 44, GSE of 23 and GHQ-

12 caseness of 10. Her major source of stress was from her manager and multidisciplinary colleagues.

Participant 2:(Reported INTP; Best-fit ENTP) This participant scored high burnout on the MBI personal accomplishment scale and low burnout on the emotional exhaustion and depersonalisation scales. She had a PSS score of 29, GSE of 33 and GHQ-12 caseness of 2. Her major source of stress was from her partner, family and friends.

Participant 3:(Reported INTJ; Best-fit ENTJ) This participant had moderate burnout on the MBI emotional exhaustion and personal accomplishment scales and low burnout on the depersonalisation scale. She had a high PSS score of 34, GSE of 33 and GHQ-12 caseness of 9. Her major source of stress was from her partner, manager and same profession colleagues.

Participant 4:(Reported INTJ; Best-fit ENFP) This participant had moderate burnout on the MBI emotional exhaustion and personal accomplishment scales and low on the depersonalisation scale. She had a PSS score of 21, GSE of 33 and GHQ-12 caseness of 3. Her major source of stress was from clients and same profession colleagues.

Participant 5:(Reported INTJ; Best-fit ENFP) This participant had high burnout on the MBI emotional exhaustion and depersonalisation scales and low burnout on

personal accomplishment. She had a PSS score of 26, GSE of 29 and GHQ-12 caseness of 0. Her major source of stress was from her clients and clients' families.

There were generally high levels of MBI burnout for emotional exhaustion and personal accomplishment for the sub-sample of participants who shifted from extroversion (E) to introversion (I). 3/5 participants scored clinical caseness on the GHQ-12 questionnaire with two participants having high scores of 9 and 10. The main sources of stress for all five participants were from colleagues, clients and partner/family & friends. All five participants were in the voluntary team, which scored significantly higher on the MBI emotional exhaustion scale and PSS scale compared with the ward-based team and community team. Taken together these results are in keeping with the hypothesis that under stress, participants who have a preference for extroversion (E) may shift to a reported type preference for introversion (I).

Shift from sensing (N) to intuition (S)

Under stress, participants with a best-fit personality preference for intuition (N) may shift to a reported type preference for sensing (S). Only one participant from all three teams shifted preference for intuition (N) to sensing (S).

Participant 1: (Reported ESTP; Best-fit INFP) This participant was in the HIV community team. She had moderate levels of burnout on the MBI emotional exhaustion and personal accomplishment scales. She had a low burnout score for

depersonalisation. She had a GHQ caseness score of 4, a PSS score of 21 and GSE of 32. She self-reported feeling stressed by collegial relationships, particularly within the same profession team. Clients and personal relationships were not stressful.

It was also observed that two participants had the reverse shift; from a best-fit sensing (S) preference to a reported intuition (N) preference. It was possible that under stress, participants may have identified their inferior function sensing (S) instead of their dominant function intuition (N) for their best-fit type. Alternatively, under stress they may have filled the questionnaire out using their inferior function (N) instead of their dominant sensing function (S). In either case, it would be expected that these participants would have high levels of stress and that the inferior function, which is the least well developed of the personality functions would be influencing their thoughts and behaviour under stressful conditions (Quenk, 1996). In order to explore this finding further, the two participants' data profiles were examined.

Participant 1: (Reported INTJ; Best-fit ESTJ) This participant scored high burnout on the MBI emotional exhaustion and personal accomplishment scales and low on the MBI depersonalisation scale. She had a high PSS score of 44, GSE of 23 and GHQ-12 caseness of 10. Her major source of stress was from her manager and multidisciplinary colleagues. If she was using her inferior function when she completed the questionnaire then the inferior function for ESTJ is feeling (F) in

accordance with type dynamics theory. This would not explain a shift from sensing (S) to intuition (N) for this participant.

Participant 2: (Reported INTJ; Best-fit ISTJ) This participant had moderate burnout on the MBI emotional exhaustion scale, high burnout on the personal accomplishment scale and low burnout on the depersonalisation scale. He had a PSS score of 21, GSE of 34 and GHQ-12 caseness of 0. His major source of stress was from his manager. The inferior function for ISTJ is intuition (N), in accordance with type dynamics theory. Under stress, type dynamics could explain a shift from sensing to intuition for this participant. He may have been using his inferior function intuition (N) when completing the questionnaire rather than his innate preference for sensing (S). Although this participant did not score caseness, his MBI scores suggested he was stressed.

The psychometric assessment results for Participant 1 strongly suggested that she was extremely stressed, but not using her inferior function. The psychometric results for participant 2 were more varied. His MBI results suggested that he had moderate-high burnout on two scales but his GHQ-12, PSS and GSE scores were unremarkable. His shift in personality type, however, included a shift from dominant function sensing (S) to inferior function intuition (N) which would be consistent with type dynamics theory when an individual is under prolonged stress (Quenk, 1996).

4.11.3 Influence of the manager in the teams

The HIV voluntary sector team had a single manager. The HIV management team had two managers, one being subservient to the other with some confusion between themselves and the team as to their exact roles. The HIV community team did not have a single manager or co-ordinator, but rather relied on consensus and collaboration, and ultimately the purchaser had to make decisions. The key influential people in the community team on a day-to-day basis, however, were all managers within their own 'same profession' teams.

In terms of personality type, then the managers were predominately extroverted, intuitive, feeling and perceiving types (ENFP). A brief description of their personality type from the MBTI manual (Hirsh & Kummerow, 1990) would suggest these people tend to enjoy and are energised by working with others. They may be social, outgoing people who like to talk out ideas and include others rather than work in isolation. They like spontaneity and flexibility, especially when being creative and may find routine and structure constrains them. They are comfortable with open-ended assignments and may even put-off closure. They tend to make decisions based on personal values and ideals. The manager of the HIV management team and the two ENFP managers in the HIV community team all identified with this personality type and style of working and confirmed it as their 'best-fit' type. The remaining manager, the manager of the HIV voluntary team shared three out of four of these functions (ENFJ).

4.11.4 Personality type and the HIV voluntary sector team

The voluntary team manager had preferences for ENTJ (reported and best-fit types). The 'team personality' however was INTJ for reported type. 6/9: (67%) had a reported type of INTJ, which was likely to reflect the culture of the team rather than the individuals themselves. The potential 'team personality' type based on their best-fit types would be ENTJ. This coincidentally, was the same personality type as the manager. An extremely influential figure in the team, however, was an INTJ (best-fit). He was the only INTJ reported type who did not have a different best-fit type following feedback. This might suggest that the team was being influenced by this INTJ person rather than their manager, and adopted INTJ behaviour within the team culture.

Prediction 1: The MBTI manual interpretation (Hirsh & Kummerow, 1990) would predict that, at best, people with an INTJ personality type are potentially creative, adopting a step-by-step approach to projects. They like closure on projects and tend to make decision in an objective, detached way. They also tend to be reflective and seen as 'reserved.' At worst, however, INTJs can be 'critical and unyielding' (Hirsh & Kummerow, 1990). Given that 6 out of 9 team members had a reported type of INTJ, it was predicted that as a group they may be critical of each other, their manager, the clients or even the team facilitator. They may be particularly entrenched in the views and ways of doing things and not open to change. They may

also, at times, not pay attention to the impact that their ideas and communication have on others.

Observation and interview evidence: The evidence from individual interview and team observation supported the view that the team as well as the INTJ individual were critical, detached, and 'stuck' in their views and attitudes. They appeared to be holding on to the past rather than developing new ways of working. The team viewed themselves as fragmented and unable to unite. They were critical of each other, the client group and external facilitation.

4.11.5 Personality type and the HIV management team

The HIV management team had a lead manager who was an ENFP and a deputy manager who was an ISFP. There was a complementary relationship between these two around two opposing functions (EN and IS) and two similar functions (FP).

Prediction 1: The lead manager's personality type was extroverted-intuition (EN) and the deputy was introverted-sensing (IS). It would predict that the lead manager would be comfortable taking a centre stage role in the creative aspects of the service and development of the team. It would also predict that the deputy manager would prefer a back-seat role, getting on with the day to day practicalities and project management.

Observation and interview evidence: Both managers felt they had a reciprocal relationship with similarities and complementarity. Conflict was not an issue for this relationship (although it was considered to be an issue for the team who had tended to *avoid* conflict situations). The lead and deputy manager worked well together and had a symbiotic relationship as follows. The manager had relinquished day-to-day management responsibility to his deputy manager in preference for taking a staff development role. He was unable, however, to 'let go' and often became involved and took charge when the deputy should be making decisions. The deputy was an ISFP who was happy to be shielded by the manager's more outgoing and creative approach; preferring to get on with the day-to-day routine tasks himself.

Prediction 2: In personality terms, it could be predicted from the personality types of the managers that decision making and project completion might be an issues because both prefer open ended and more flexible working styles (P) rather than structure and closure (J).

Observation and interview evidence: Within the wider team, there was confusion about which manager staff should approach for direction on specific issues because of their ambiguous roles. There was also consensus that decisions were left unmade and projects were not closed. Both managers agreed that a major area for personal development was for them to be more focused, more structured, and achieve closure on projects which would give the wider team more clarity about boundaries and expectations

Prediction 3: It was predicted that as an ISFP team, this team would have difficulty 'moving on' with change and would have a preference to keep things as they were.

Observation and interview evidence: The team and individuals acknowledged that all around them was changing and they were not able to. In particular they were undergoing staff reductions and mergers and moving location in response to the decline in HIV client numbers in their service. A major issue on the team day was how staff were holding on to established relationships, old practices and even furniture, to preserve their identity and history. They did not want to integrate with each other for fear of losing their past. Although they were working together, there was a perceived split between the team based on pre-merger identity. Similarities and differences in personality type accentuated this split.

Prediction 4: It was predicted that on the basis of personality type, the two people most likely to differ in their views and ways of doing things would be the ENFP and ISTJ managers. This is because they were direct opposites on all four-personality functions.

Observation and interview evidence: Both the ENFP and ISTJ managers independently acknowledged their strained relationship with one another. The other team members also identified that most conflict was apparent between these two people.

4.11.6 Personality type and the HIV community team

The HIV community team did not have an identified manager or co-ordinator and this in itself might suggest that this team could have problems with leadership; either because they lacked direction and decision making or because there would be conflict between 'would-be' leaders. There were three managers of other services in the team. Two managers were ENFP and the other was INTP.

Prediction 1: The three managers shared two personality functions, which were intuition-perceiving (NP). This would suggest that they would all share a creative outlook, and be enthused by open-endings, spontaneity and flexibility in their style of working. They would differ, however, in the way they do this because of the influence of the other two functions on the personality dynamics. The extroverted NP's would do their thinking out loud with one another, whereas the introverted NP would prefer to think and reflect before discussing the possibilities. Another difference would be the way that they like to approach others. The managers with a feeling (F) preference would prefer to make decisions about clients and service related issues in a subjective, personal value-driven way. This would be at odds potentially with the more detached and objective approach to decision making of the manager with the thinking (T) preference. The differences between T and F interpersonal style and decision making are often a source of conflict in teams. People with a thinking (T) preference often find those with a feeling (F) preference to be overly involved, emotional and place importance on their subjective values.

People with a feeling (F) preference in contrast find people with a thinking (T) preference to be detached, logical and emotionally 'chilled' in their interactions.

Observation and interview evidence: The two managers who shared the same personality type ENFP agreed to the descriptions of their type and similarities in each other. They tended to ally as heads of two sub-HIV teams and 'take on' other professionals or services whom they felt did not live up to their personal values about how the service should be run and the professionals roles in it. In the wider team there was consensus that these two managers had confronted health care staff from two HIV medical services and one HIV psychosocial service which was, in fact, the 'rest of the team'. These interactions tended to be emotionally charged and confrontational as might be predicted from their personality type. That is not to say ENFP personality types are confrontational, but rather they like to talk out issues and discuss matters in an emotionally driven way. This complements but also potentially conflicts with the more detached, logical and objective approach of people with a thinking (T) preference.

Prediction 2: The 'team personality' for the HIV community team would be split between an ENFP and INTP influence. In particular there would be conflict between the extroverted-feeling (EF) and introverted-thinking individuals (IT) in the way they approach problems, make decisions and interact. The ENF types would tend to push for adopting their ideas and values through discussion or confrontation, whereas the INT types would tend to use logical and objective reasoning after much thought and reflection, and may even prefer to communicate their ideas in writing.

Observation and interview evidence: There was a split in the community team based on location and affiliation with physician services. The introverted-thinking (IT) types seemed to be better able to negotiate a professional relationship with physicians and other key health care staff, to enable referral, consultation and shared care of clients compared with the extroverted-feeling (EF) types. The main source of conflict appeared to be differences in style of communication. The extroverted-feeling (EF) types tended to verbalise their views and challenge the introverted-thinking (IT) types. The introverted-thinking (IT) types, in contrast, tended to want to think things through logically and would often 'introvert' even more when challenged by their extroverted-feeling (EF) type colleagues. This source of differences could also be accounted for by i) location differences, and ii) professional training differences. The extroverted-feeling (EF) types were off site and non-qualified health professionals. The introverted-thinking (IT) types were all on site and qualified health professionals.

4.11.7 Summary of MBTI personality type and stress in teams

The predominance of NF and NT types in the sample studied could be for several reasons. Firstly there may be sample biasing because of small numbers. Secondly, the bias may reflect a 'type and occupation fit', especially for NF types who are in greater proportion in mental health and psychosocial professions. A third possibility is that under stress, participants may have identified their inferior function (N) because it emerges under stressful conditions; when in fact their natural preference

under normal conditions was for sensing (S). Levels of stress were assessed to be high for this sub-sample. This, interpretation however, seems unlikely because only two participants who had a best-fit sensing (S) preference had an intuitive (N) preference reported type.

The majority of participants (18/23; 78%) in this study, who completed the MBTI personality questionnaire, were assessed to be intuitive types (N). This would mean that they would tend to be conceptual thinkers, able to see the possibilities, anticipate the future outcomes and see the 'big picture'. Intuitive types are often creative individuals and in combination with a perceiving (P) preference, may particularly enjoy start up projects, innovation and change (in moderation). In this sample 11/23 (48%) intuitive types also had a perceiving (P) preference.

There was a tendency under stress for shifts from F to T and E to I which was in keeping with the research on stress and type (Cooley & Keesey, 1981). The shift from E to I was particularly evident in the HIV voluntary sector team who had significantly higher MBI emotional exhaustion scores and Perceived Stress Scale scores compared with the community and ward-based teams.

ENF preferences were predominant within HIV service managers. HIV service managers' preferences were also reflected in the community, management and voluntary sector 'team-personality' types. In the voluntary team however, although best-fit team type reflected manager type, reported type for the team type was different and overwhelmingly INTJ. It is possible that recruitment bias could

account for 6/9 team members having a reported type of INTJ, but as they had different best-fit types, this suggests work-based influences were encouraging INTJ reported preferences. Of particular note was the INTJ participant in the voluntary team who did not have a different best-fit type. He was singled out as a particularly influential figure in the team and was most noted for his 'critical and unyielding' behaviour, which is typical of INTJ's less desirable attributes. An alternative interpretation is that although the voluntary team had the potential to be ENFJ based on individuals' best-fit type descriptions, they had shifted to introversion (I) and thinking (T) preferences for reported type because of prolonged stress. Shifts to introversion (I) and thinking (T) reported preferences have been observed in other studies investigating stress and personality type.

The HIV voluntary sector team had self-report data and psychometric scores to suggest that they were highly stressed. 5/9 members of this team shifted preferences from extroversion (E) to introversion (I) and 2/9 members of this team shifted preferences from feeling (F) to thinking (T). Contrary to previous research findings, the reverse shift effect, from sensing (S) to intuition (N) rather than from intuition (N) to sensing (S) was also observed in this team. For one participant this shift could be explained in terms of the questionnaire tapping his inferior function, intuition (N), under stress; rather than tapping his dominant function under normal circumstances.

In general, the numbers for this analysis were too small to make any firm conclusions but case and team analysis support the hypothesis that team dynamics

could be accounted for in terms of interaction of personality types. Differences in interpersonal style and decision making and potential areas of conflict and complementarity within the teams could be predicted from MBTI type analysis. The high levels of stress in the teams may reflect interpersonal sources of stress to include colleagues as well as clients, and areas of conflict in the team.

5.0 Discussion

This study set out to investigate whether HIV professionals experience more stress from their interactions with colleagues, than with their clients. This is in opposition to the prevailing theory of Maslach and her colleagues, who endorse the view that stress and burnout in the caring professions are specific to **client** sources of stress (Maslach, 1978; Jackson et al., 1986). Furthermore, if colleagues are a significant source of stress, then this might compromise the stress-buffering effects of social support in the work place (Leiter, 1990).

Stress and burnout research in HIV care has tended to focus on studying client sources of stress and the stress-buffering effects of social support. Little is known about organisational sources of stress and the **interaction** of stressful and supportive relationships at work. There has also been no research on applying organisational and team development interventions to improve collegial and team relationships as a method of reducing staff stress in HIV care services (Schaufeli et al., 1993; Bennett et al., 1995; AIDS Care special edition, 1996).

This study aimed to develop the established client-focused view of stress and burnout in health care provision generally, and HIV services specifically. The study was designed to take a broader view of interpersonal sources of stress and support, to examine how they interrelate as well as assess their relevance to understanding stress and burnout in HIV services. This field of health care was chosen not only because of the impact of HIV client care on professional stress and burnout, but also because HIV services have undergone substantial changes. HIV services have experienced rapid expansion over the last fifteen years as

medical treatments and psychosocial care have advanced and changed. More recently, the relative success of combination drug therapies in prolonging life and reducing symptoms of HIV disease for clients, has meant that the task of caring for people with HIV disease has changed (BHNA, 1997). In addition, HIV services have had time to review and evaluate their practice and be more proactive in their service delivery. Subsequently, the roles, remit and team identities of staff have also changed. The reduction of funding and manpower in some services has resulted in mergers and closures, re-deployment, redundancy and resignations (Salt, 1998). Change and uncertainty in the work place is a well-known antecedent of occupational stress (Cooper, 1983). In addition, there may be increased competition and conflict between staff and decreased collaboration and support as they aim to protect their services. For those staff who seek to resist change, there may be the added stressor of providing a service which no longer 'fits' the current situation in HIV service development (de-synchrony). Staff may be at increased risk of 'team burnout' because their personal objectives no longer fit the team trajectory (Drexler et al., 1994).

It is the interactive nature of health care systems, which has been central to this research. The study was designed to obtain information which could reflect the dynamic nature of human interaction and how changes within HIV services, from management to service user, may have impacted on collegial relationships. There are limitations, however, to the interpretation of the data obtained in this study. This is because of the constraints of cross-sectional survey design as well as the relatively small numbers of participants for some analyses. Nevertheless, depth of analysis has been achieved by complementing the psychometric data with observation and interview methods. Of particular relevance to the methodology for this study was the emphasis on studying **HIV teams** rather

than a random selection of HIV professionals. The teams were not randomised or stratified, but rather naturally occurring teams from different settings. The rationale for using naturally occurring HIV teams was in order to reflect team behaviour and a systemic view of occupational stress and burnout in HIV services. The potential for error was considered in the interpretation of the results. The internal reliability of the questionnaires used in this study was acceptable. In view of the small numbers and potential sample bias, however, individual sets of results were not considered to be robust enough to be viewed in isolation from each other. The following discussion highlights key observations and interpretations of the **patterns** of results and considers the implications for organisational approaches to stress management in HIV services. This is with a view to suggesting ways of complementing individual and group cognitive-behavioural interventions, currently used for stress management. The results were also considered to be non-generalisable to other HIV or health services and temporally specific to HIV service development in the UK at this present time. Intervention implications are also based on what might be appropriate for each team rather than a blanket intervention for all HIV teams. As became apparent in the results section, team characteristics and issues differed across the services which took part.

5.1 Interpersonal sources of stress and support and health outcome

5.1.1 Are colleagues a greater source of stress than clients are?

Several studies have acknowledged the stressful nature of collegial relationships in the caring professions including HIV care work (Barbour, 1995). In the current study it was hypothesised that collegial relationships would be

significantly more stressful for HIV professionals than client sources of stress. In order to test this hypothesis, interpersonal sources of stress were analysed for each participant and for each HIV team. It was apparent that the participants in this study rated the multidisciplinary team to be the greatest source of interpersonal stress compared with other interpersonal sources of stress. Client sources of stress were rated second, followed by the manager and same profession colleague sources of stress. Home-based relationships (partner, family and friends) were rated as the least stressful. It is possible that the results obtained in the current study are a reflection of sample bias and particular problems the participants in this study had with multidisciplinary colleagues.

There was also, however, a significant correlation between GHQ-12 caseness scores and perceiving the multidisciplinary team as a source of stress ($r = .331$; $p = .037$). The higher participants rated the multidisciplinary team as a source of stress, the higher were the clinical caseness GHQ-12 scores. GHQ-caseness did not correlate with any of the other interpersonal sources of stress measures in this study. Causality, however is not known, and it is possible that people with higher GHQ caseness levels were more likely to view multidisciplinary teams as stressful. Indeed it could be argued that their psychopathology might have contributed to the stressful communications and confrontations in the team in the first place. In this study, 11/42 (26%) of participants scored caseness. By comparison, similar study populations have found higher numbers of caseness of between 35-40% of the sample (Miller, 1995a; Catalan et al., 1996). It is possible that HIV care services attract some individuals who have pre-morbid psychological problems and that this accounts for the caseness, rather than occupational stress. It may also be, however, that these individuals are more prone to stress and burnout. Psychiatric morbidity and burnout was reported in

20-40% of HIV volunteer workers (Maslanka, 1992; Guinan et al., 1991). In a population of HIV physicians, however, there was a 36% increase in depression and 34% increase in anxiety for participants, suggesting that working in HIV services may induce psychological distress. Although the current study cannot demonstrate direction of causality, there is most likely, a combination of higher levels of psychological problems as well as an increase in psychological/physical symptoms related to stress at work in HIV professionals. This is because the one factor is likely to impact on the other in a circular way. This 'chicken and egg' relationship reflects the reciprocity of social interaction and how problem people may affect relationships at work as well as how problem relationships at work affect people. GHQ caseness in this respect might be a measure of symptomatology caused by individual factors, such as personality and cognitive factors and/or social factors, such as interpersonal communication problems and conflict. The above results might suggest that multidisciplinary team collegial relationships were;

- a) perceived as more stressful than client relationships, and
- b) could account in part for difference in physical/psychological health (caseness) of participants.

In addition, same profession and manager sources of stress, although not found to be associated with caseness, were perceived as more stressful than partner, family and friend sources of stress. Given that the means for multidisciplinary and client sources of stress were similar, it would not be reasonable to conclude that collegial relationships are more stressful than client relationships in HIV care on the basis of this data alone.

5.1.2 Why was the multidisciplinary team perceived as stressful?

In this study the multidisciplinary team may have been viewed as more stressful than other sources of stress for several reasons. Qualitative analyses provided the following accounts. Firstly, diversity in multidisciplinary teams was high because of the difference in professional orientations and the tendency for team members to see how their approaches differed and conflicted rather than complemented each other. Secondly the multidisciplinary teams in this study lacked clear leadership structures and tended to compete and conflict rather than use co-operation and consensus to move forward and make decisions. Thirdly, the multidisciplinary teams may have been a natural 'fall guy' in the work-place, with participants tending to 'blame' difficulties on members of the multidisciplinary team, rather than on their own professional colleagues, manager and service users. A fourth possibility might be that the multidisciplinary team item in the questionnaire tapped team rather than group phenomena. A multidisciplinary team is different from a group of health care professionals. The team is expected to work together and produce results, that are in excess of individual contributions (synergy). In so doing they may conflict and fragment and not function as a team at all (Drexler et al., 1994). A group of health professionals could be fragmented in the first instance and be nothing more than a collection of independent workers. In order to explore these hypotheses further, the following section focuses on why the multidisciplinary team may have been identified as the major interpersonal source of stress for participants in this study.

5.1.3 Who perceives the multidisciplinary team to be a greater source of stress and why?

On further inspection of the quantitative data, it was found that there were differences in participant characteristics and perceptions of the multidisciplinary team as a source of stress.

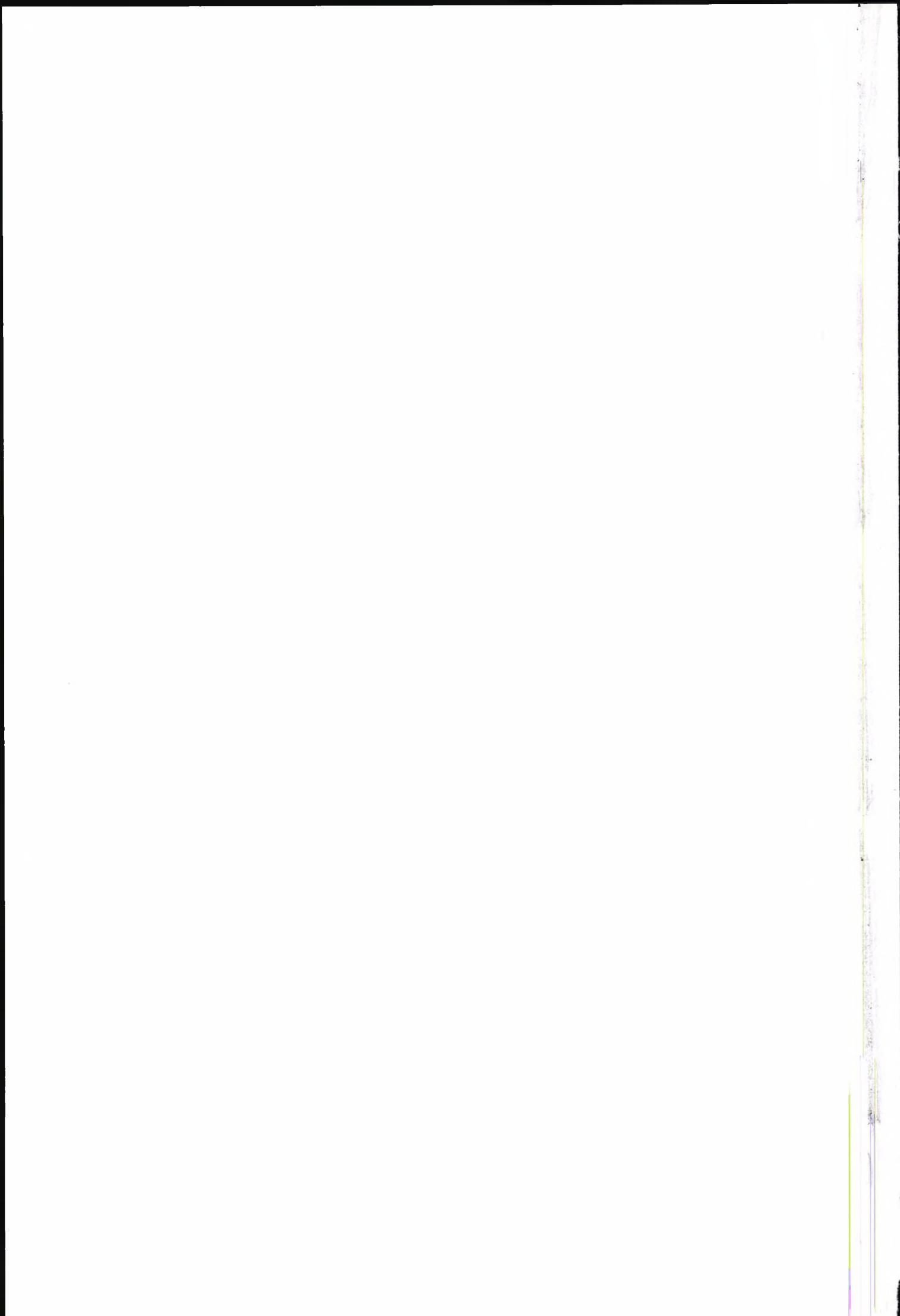
Managers: There were significant differences between participants' characteristics on perceiving the multidisciplinary team as a source of stress. Managers (17/45; 38%; mean = 4.57) viewed the multidisciplinary team to be a greater source of stress than non-managers did (28/45; 62%; mean = 3.26) ($F = 4.86$; $df = 1$; $p = 0.034$). Qualitative analysis suggested that the results might have reflected the role of managers within the multidisciplinary team as spokespersons for their same profession teams. The managers reported being in the 'front-line' and 'carrying the torch' for their service, staff and clients. This meant they were often called upon to be the one to bring up contentious issues, challenge team members and be challenged. Disagreement and conflict among people may contribute to work stress (Maslach & Leiter, 1988). Managers may also have reported that multidisciplinary teams were a greater source of stress because staff tended to look to same-profession managers to steer the multidisciplinary team in the absence of clear leadership structures. Managers, in the multidisciplinary team context, however, may lack the power to make decisions because it is diffused across professions and may not reflect individual member's views. In the cause of democracy for some teams and internal sabotage for others, decisions may never be reached and actions not taken. Lack of sense of control may contribute to increased stress and a sense of hopelessness (Landsbergis, 1988; Jackson, 1983; Pines et al., 1981). In a study

of health care workers, high workload and lack of decision-making power was related to burnout on all three MBI dimensions (Landsbergis, 1988).

Paramedical professionals: It was also found that the paramedical professionals (7/41; 16%: mean = 5.6) found the multidisciplinary team to be a significantly greater source of stress than did the nurses (25/41; 56%: mean = 3.04) and HIV workers (9/41; 20%: mean = 3.7) ($F = 4.46$; $df = 2$; $p = .02$). This may be related to the finding that community-based HIV teams (18/45; 40%: mean = 5.17) perceived the multidisciplinary team to be significantly more stressful than did hospital-based HIV teams (27/45; 60%: mean = 3.21) ($F = 7.1$; $p = .01$). One possibility is that the paramedical professionals tended to be more isolated in their community settings compared with the ward-based services. Several studies have demonstrated a correlation between lack of peer support and burnout (Burke et al., 1984; Dignam & West, 1988; Leiter, 1988; Ross et al., 1989). But, given that the HIV voluntary sector team members were similarly 'isolated', this difference would not appear to account for the significant effect. An alternative explanation is that the HIV community team were more reliant on the collaboration within the multidisciplinary team for referrals and liaison, compared with the voluntary HIV team and ward-based HIV teams. Qualitative analysis showed that a major issue for the community HIV team was the difference in 'collaboration' between medical and paramedical HIV professionals in the wider team. There was a perceived power imbalance between medical and paramedical HIV professionals deciding when to share or withhold information and clients, and with whom. In particular, paramedical HIV professionals felt excluded more often than included as part of the multiprofessional team. Paramedical team members reported that conflict between these sub-systems was frequently about

this issue. It is possible that frustrations around the perceived need for collaboration between professional groups, was the influencing factor rather than isolated working practices per se. The voluntary HIV team reported that they did not see themselves as a team but rather as 'a group of HIV workers' who worked in separate sections of the service. It appeared that staff in the HIV voluntary team felt they could 'do their job' with minimal contact with one another. They also were not required to liaise with medical professionals in the same way as did the HIV community team. This could be particularly relevant and will be expanded upon in the section on qualitative analysis of the HIV community team (p 168).

Increased time in HIV speciality: Length of time in service may also be a factor related to perceiving the multidisciplinary team as a source of stress. In this study, ratings for the multidisciplinary team as a source of stress were significantly higher for HIV professionals who have been in the speciality for more than 6 years ($F= 10.41$; $df = 2$; $p < .0001$) compared with those who have been in it for less time. There was also a trend for the mean scores to increase across time. The mean stress score for HIV professional in the HIV speciality for less than 2 years was 2.1 (9/38; 24%; $sd = .92$); from 2-5 years it was 3.85 (15/38; 39%; $sd = 1.65$), and more than 6 years was 5 (14/38; 37%; $sd = 1.5$). Decreased support may also be a factor. Participants who have been in the HIV speciality for more than 6 years were also found to rate the multidisciplinary team significantly lower as a source of practical support (37/45; 82%; $F = 4.53$; $df = 2$, $p = .018$) compared with those who had been in it for less time. There was also a trend for the mean scores to decrease across time. The mean support score for HIV professionals in the HIV speciality for less than 2 years was 4.2 (9/38; 24%; $sd = 1.71$); from 2-5 years it was 3.4 (14/38; 37%; $sd = 0.93$), and



more than 6 years was 1.15 (14/38; 37%; $sd = 2.6$). In combination, these results suggest length of time in the HIV speciality may be related to increased perceptions of stress and decreased perceptions of support from the multidisciplinary team. This was not a longitudinal study and therefore it cannot be concluded that multidisciplinary team relationships 'deteriorated' over time. This, however, would be a useful hypothesis to test in a prospective longitudinal study, especially given that self-efficacy scores were also found to correlate negatively with increased time in the HIV speciality (36/42; 86%: $r = -.9$; $p = .005$). Although self-efficacy was not found to be correlated with multidisciplinary team sources of stress, or sources of support scores, it is possible that team relationships have an impact on an individual's sense of self-efficacy and perceived ability to be effective within the multidisciplinary team environment. This may be particularly relevant for problems which are viewed as 'unchangeable'. The HIV professionals may develop a sense of 'learned-helplessness' (Abramson, Seligman & Teasdale, 1978) and this may reduce self-efficacy. In support of this interpretation was the finding that perceived changeability of the stressful situation at work which participants described in the questionnaire, was found to be significantly negatively correlated with perceiving the multidisciplinary team ($r = -.39$; $p = .033$) and the manager ($r = -.418$; $p = .022$) as a source of stress. The less changeable the stressful problem at work was viewed to be, the more likely the multidisciplinary team and manager were viewed as a source of stress. Again, a prospective, longitudinal study would be required to explore the relationship between length of time in the speciality, team relationships, perceived changeability of stressful problems at work and self-efficacy further. Even on the basis of this limited evidence, however, studying the effects of improving multidisciplinary team

working on perceptions of stress and support would seem to be an appropriate method of organisational stress management to evaluate.

Women with dependants: Having dependants might also be a factor related to perceiving the multidisciplinary team as a source of stress. In this study, only women participants had children (10/40; 25%; mean = 5.75) and they were found to be significantly more likely to view the multidisciplinary team as a source of stress compared with those who did not have children (30/40; 75%; mean = 3.17) ($F = 15.57$; $p < 0.0001$). It is not apparent why in particular the multidisciplinary team should be perceived as a greater source of stress based on having dependants, but having dependants in this study was also found to be linked to higher GHQ-12 scores. This may be the effect of a sample bias or an indication that the women with children in this study had higher levels of physical/psychological health problems compared with participants without children. Women with children also rated the manager (below) to be a significantly greater source of stress than participants without children. It is possible that these women in particular had increased demands, which influenced their relationship with their manager and colleagues. Conflicts between family and work responsibilities for female managers has been associated with increased irritability, anxiety and depression (Greenglass, 1985). It may also be that participants without children were more available to go out and seek social company and support. Indeed it has been argued by Sullivan, that gay men may be especially supported by a network of gay friends who have pulled together and supported one another (Sullivan, 1998). For Sullivan, it is the heterosexual male whom he perceives to be most at risk of lacking support.

Lack of multidisciplinary team support: It also was noted that lack of support from multidisciplinary colleagues was directly related to viewing them as a greater source of stress. There was a negative correlation between the multidisciplinary team being rated as a source of stress and the multidisciplinary team being viewed as a source of emotional support (trust & share with: $r = -.491$; $p = .002$) and social support ($r = -.495$; $p = .002$). There was also a positive correlation between wanting more emotional support from the multidisciplinary team and viewing the multidisciplinary team as a source of stress (trust and share with; $r = .459$; $p = .003$: lean on/turn to; $r = .402$; $p = .012$). The greater the discrepancy between ideal and actual emotional support, the higher the participants tended to rate the multidisciplinary team as a source of stress. From these results, it would appear that the less supportive the multidisciplinary team was, the more participants tended to view it as a source of stress. However, wanting more emotional, practical and social support from the multidisciplinary team was also associated with **decreased** perceptions of stress from family and friends (trust and share with; $r = -.339$; $p = .032$: trust/lean on; $r = -.491$; $p = .001$: practical support; $r = -.339$; $p = .035$), same profession colleagues (social support; $r = -.352$; $p = .03$) and the client (social support; $r = -.378$; $p = .019$). One possibility is that perceived need for more support from multidisciplinary colleagues was related to decreasing perceptions of stress from other people. Focusing on multidisciplinary team inadequacies may have buffered the individual from focusing on other interpersonal sources of stress.

The relevance of the negative correlation for these results is ambiguous. It may reflect an indirect effect of greater stress from family, friends, colleagues and

same profession colleagues on reducing the perceived need for more support from the multidisciplinary team. It may be that whilst focusing on other sources of stress, for example, participants are less aware of, or concerned about, stress from multidisciplinary team sources. Alternatively it may reflect the effect of greater perceived need for support from the multidisciplinary team on reducing perceptions of stress from family, friends, same profession colleagues and clients. Focusing on the inadequacies of the multidisciplinary team may 'protect' the individual in some way, from perceiving other sources of interpersonal stress. The multidisciplinary team may be a 'scapegoat' to focus on when other relationships are faring less well. This interpretation suggests that the multidisciplinary team may provide a stress-buffering role in the HIV service, but not in the expected way, as a direct source of support. Rather it may provide a stress-buffering role by attracting focus away from other interpersonal sources of stress and thus reducing perceptions of stress from these sources. This interpretation is developed more in the section on the role of the multidisciplinary team in buffering stress (p170).

It is not possible on the basis of these quantitative results to conclude whether the multidisciplinary team is rated more highly as a source of stress because;

- i) it is more stressful
- ii) it is less supportive
- iii) it is a scapegoat to blame, or
- iv) a combination of these factors.

Other factors which have not been measured in this study may also be related to these findings. Qualitative data obtained from the HIV teams was analysed to

understand what the issues in multidisciplinary teams might be. In particular, the HIV community team issues were examined as this team perceived the multidisciplinary team to be significantly more stressful than did the other teams ($F = 3.45$; $p = .04$).

The HIV Community Team: The HIV community team was found to rate the multidisciplinary team significantly more highly as a source of stress compared with the voluntary sector and ward-based teams. Analysis of team issues and behaviour supported the view that the HIV community team, in particular, found it difficult to communicate with each other and agree ways of working together. They lacked a leadership structure and tended to rely on personalities and positions to influence others. Differences in theoretical orientations towards their clients, access to clients, information and resources (power differences), location of service and personality differences all appeared to be influential factors in impeding communication. Perceived differences appeared to result in misunderstanding and ambiguity, conflict, lack of valuing diversity and lack of information (and client) sharing. Although there was potential for complementary working relationships and dovetailing of professional services, the context of perceived difference and competition seemed to mask potential collaboration. It was noted, however, that the greater the conflict and fragmentation between sub-teams within the multidisciplinary team, the more the sub-teams (which were often same profession teams) appeared to pull together. It also seemed that as these sub-teams strengthened their internal alliance, this created more tension between sub-teams resulting in further fragmentation and conflict between sub-teams. Together, these interpretations demonstrate 'reciprocity' between two processes. It is not a matter of whether alliances in same profession teams fragmented the multidisciplinary team, or

whether fragmentation in multidisciplinary team resulted in alliances in sub-teams. Causality is the language of the transactional model of stress. Rather, the circularity of relationships could mean that both were happening at the same time with a degree of homeostasis in the wider system (Campbell et al., 1994).

If collegial relationships are an important factor in the mediation of stress then this might suggest that intervention should aim at improving collegial and team relationships. Promoting the development of functional team relationships as a means of reducing (or preventing) stress and increasing support for team members may be an appropriate intervention in some HIV services. The next section explores the alternative hypothesis, that the multidisciplinary team may play the role of 'organisational scapegoat' and buffer stressful problems.

5.1.4 The role of the multidisciplinary team in buffering occupational stress

Several studies investigating occupational stress have identified social support as a key modifier of perceived stress and psychological strain (Leiter & Maslach, 1988; Dignam & West, 1988; Leiter, 1990, 1991; Constable & Russell, 1986; Cottington & House, 1987). The buffering hypothesis model of social support suggests that social support will protect an individual under high stress conditions, but will have little effect on individuals under low stress conditions.

In this study, the relationship between interpersonal sources of stress and support was more central than the effects of support alone. In particular, it was hypothesised that the more stressful a relationship was perceived to be, the less it would be viewed as supportive and vice versa. It was also expected that there

might be correlations between one source of stress and another source of support, suggesting that one relationship may affect perceptions of another. It was found that multidisciplinary team support was only related to reduced perceptions of multidisciplinary team sources of stress (and not other interpersonal sources of stress). These results suggest that multidisciplinary team support may have provided a stress buffering role in reducing the effects of stress from multidisciplinary team sources, but not from other interpersonal sources of stress.

It was also predicted that the greater the discrepancy between actual support and ideal support from significant others, the more likely the significant other would be perceived as a source of stress. As has been discussed on p167, wanting more emotional support from the multidisciplinary team was associated with increased perception of stress from the multidisciplinary team but decreased perceptions of stress from family and friends, same profession colleagues and clients. It was suggested that perceived need for more support from multidisciplinary colleagues might be related to decreasing perceptions of stress from other people. Focusing on multidisciplinary team inadequacies may have buffered the individual from focusing on other interpersonal sources of stress. In psychodynamic terms this might be conceptualised as projection. In systemic terms, the multidisciplinary team may provide a 'scapegoat role' for attracting the focus away from other interpersonal sources of stress (Campbell et al, 1994). It may be that 'blaming' the multidisciplinary team was functional in protecting the client, the HIV professionals' families and friends and the same profession colleagues from being identified as a source of stress.

It is also possible that multidisciplinary team support is related to an increase in perceiving stress from other sources. In the absence of the multidisciplinary team not giving cause for complaint (i.e., actual support matches ideal support), then attention might be turned on to other relationships as a source of stress. Alternatively, it could be that stress from other interpersonal sources is making the multidisciplinary team appear more favourable in providing adequate support. This would be similar to the 'halo' effect described by Thorndike (1920) which is the tendency for people to see others in a rose-tinted way based on inflating their good attributes and overlooking their bad attributes. Ironically, the dichotomising of significant others, as *either* good (supportive) or bad (stressful) relationships, is endemic in many of the stress studies reviewed for this research. Relationships with significant others are likely to have supportive aspects as well as stressful aspects. They may 'appear' more supportive because the supportive aspects outweigh the stressful aspects. Likewise a group or team may 'appear' more stressful because other relationships appear more supportive (and vice versa).

Interlinking all the above strands of the discussion so far, with finding that the multidisciplinary team was ranked first as a source of stress, one has to question whether in fact this reflects perceived stress, a reverse halo effect (or 'horned effect') or a 'scapegoating' phenomenon. In order to understand more about this, the role of other colleagues in the service was considered. It seems likely on the basis of the above evidence, and in accordance with systems theory, that what happens in one part of the HIV service, is likely to affect other parts (Campbell et al., 1994).

5.1.5 What about other health professionals as a source of stress and support?

Although some profession colleagues and managers were not identified as being the main sources of stress and were secondary to client sources of stress, the results suggest that these relationships should be considered when assessing staff stress and burnout in HIV care. Stress and burnout studies, which have investigated the effect of different interpersonal relationships on burnout, have almost exclusively focused on the stressful nature of client relationships and supportive nature of professional relationships (or lack of support). In comparison, few studies have focused on the stressful nature, or the dual stressor-support role, of professional relationships. Comparison of the findings from this study with previous research is therefore limited.

The manager: There were no significant differences between participants' characteristics on perceiving the manager as a source of stress. The manager was viewed as a greater source of stress, however, by HIV professionals in the speciality for 6 or more years (14/38; 37%: mean = 4.4; sd = 1.8) in contrast to those in it for less than 2 years (9/38; 24%: mean = 2.5; sd = 1.6) or between 2-5 years (15/38; 39%: mean = 2.9; sd = 1.6) ($F = 4.09$; $df = 2$; $p < .025$). Although this was only a cross-sectional study, it may suggest that perceptions of manager sources of stress are likely to be higher with increased length of time in the HIV service. That is not to say that the manager *creates* more stress for subordinates or even remains in post, but rather, the 'role of manager' may be viewed differently depending upon the length of time the participant has been in the HIV service. One possibility, for example, is that as participants become more senior themselves, they may become more questioning of management practice, or desire

promotion which create tensions between manager and subordinate. Lack of career progression has been identified as a theoretical source of burnout although studies have not investigated this specifically (Cordes & Dougherty, 1993). In a study by Leiter & Maslach, it was found that unpleasant relationships with the supervisor were associated with increased MBI emotional exhaustion, whereas pleasant supervisor relationships were associated with decreased depersonalisation (Leiter & Maslach, 1988). In the current study, manager sources of stress and support were not found to be associated with MBI scores or other health outcome measures.

It was also found that participants with children (10/42; 24%: mean = 4.55) were significantly more likely to view their managers as a source of stress compared with those who did not have children (32/42; 76%: mean = 2.56) ($F = 6.131$; $p = 0.018$). Participants with children were also found to have significantly higher GHQ-12 caseness scores. As the participants with children in this study were all women, however, it is not clear whether gender differences, or having dependants was related to GHQ-12 caseness. It may be that women with dependants have greater demands which may conflict with the team or job demands. They may need to have more flexible working arrangements, for example, or time off for dependants. It is also possible, however, that the women with children in this study had higher premorbid caseness levels. It is also possible that the manager was perceived as a greater source of stress because s/he was not viewed as being supportive.

It was predicted that manager support would be significantly related to decreased sources of stress. There was a negative correlation between viewing

the manager as source of stress and as a source of support on all four SOS scales (trust and share with; $r = -.479$; lean on/turn to; $r = -.522$; practical support; $r = -.606$; social support; $r = -.440$; all $p < .005$). Increased emotional, practical and social support from the manager would appear to be related to lower ratings of the manager as a source of stress. This might mean that increasing the supportive role of the manager could reduce stress for staff. There was also a negative correlation between getting practical support and emotional support from the manager and perceiving the multidisciplinary team as a source of stress (trust and share with; $r = -.398$; $p = .016$; lean on/turn to; $r = -.364$; $p = .021$) and the same professional colleagues as a source of stress (practical support; $r = -.372$; $p = .016$). This might suggest that manager support also buffers stress from other professional sources and not just manager sources of stress.

The discrepancy between ideal and actual support from the manager was calculated for each of the SOS items and correlated with each source of stress. It was hypothesised that the greater the discrepancy, the higher participants would tend to rate the sources of stress. There was a significant correlation between discrepancy scores and manager sources of stress scores on three SOS scales. The greater the discrepancy between ideal and actual support (trust & share, lean on/turn to and practical support) the higher participants tended to rate the manager as a source of stress (trust and share; $r = .502$; $p = .001$; lean on/turn to; $r = .526$; $p < .0001$; practical support; $r = .627$; $p < .0001$). This result further supports the idea that increasing manager support may reduce stress for staff. In addition, there was a significant correlation between discrepancy scores for practical support from the manager and rating the multidisciplinary team as a source of stress ($r = .348$; $p = .028$) and the same profession colleagues as a source of stress ($r = .359$; $p = .021$). Again it would

appear that manager support has a stress buffering effect on other professional relationship sources of stress. Taken together, these results suggest that manager support has an important role to play in mediating (increasing and reducing) the effects of interpersonal stress from professional sources. No significant relationships were found for reducing client or client family sources of stress. Although it cannot be concluded that the manager did not have an effect on buffering these sources of stress, there is no evidence to support this. There is perhaps, sufficient evidence to suggest that it would be useful to investigate the impact that a management development programme might have on improving manager support. If the manager can develop improved ways of offering emotional, practical and social support to subordinates, then these HIV professionals might have reduced perceptions of stress from collegial sources of stress.

Same profession colleagues: There were no significant differences between participants' characteristics and perceiving same profession colleagues as a source of stress. There were also no significant correlations between same profession colleague sources of stress and health outcome measures. On the cluster analysis however, same profession colleagues were in a different cluster to manager and multidisciplinary team sources of stress (which were clustered together). It might be predicted on the basis of the above results that the multidisciplinary team would be in a cluster of its own. The reasons for this result might be explained in part by qualitative analysis. Same profession colleagues in the ward-based teams were required to work with each other, the clients and the multidisciplinary team on a daily basis. The community and voluntary teams, in contrast, did not have to work with same profession colleagues on a daily basis and could, to some extent, regulate their client and

multidisciplinary team contact. The same profession teams also had clear leadership structures, whereas the multidisciplinary teams did not. Subsequently the same profession teams or sub-groups seemed to have a different ratio of time spent with each other, control over their client contact and clearer leadership structure compared with multiprofessional teams or sub-groups. Increased role ambiguity has been linked to increased emotional exhaustion and depersonalisation and decreased personal accomplishment (Schwab & Iwanicki, 1982; Brookings et al., 1985; Jackson et al., 1986). The confounding variables in the current study make interpretation of the results difficult. In addition, the opportunity for working together for nurse teams increased the opportunity for them to obtain support from one another. Supportive relationships with co-workers have been associated with decreased burnout (Maslach & Pines, 1977; Constable & Russell, 1986; Leiter & Maslach., 1988). This may have buffered the effects of stress and provide another confound to consider in the interpretation of the results.

It was predicted that same profession colleague support would be significantly related to decreased sources of stress scores. There was a negative correlation between the same profession colleagues being viewed as a source of practical support and the manager being seen as source of stress ($r = -.368$; $p = .021$). More striking was the impressive set of negative correlations between the same profession colleagues being viewed as a source of support on all four SOS scales and the multidisciplinary team being viewed as a source of stress (trust and share with; $r = -.389$; $p = .016$: lean on/turn to; $r = -.380$; $p = .019$: practical support; $r = -.498$; $p = .001$: social support; $r = -.423$; $p = .008$). The more practical, emotional and social support participants had from same profession colleagues, the lower they tended to rate the multidisciplinary team as a source

of stress. There was also a positive correlation between wanting more emotional and practical support from the same profession colleagues and seeing the multidisciplinary team as a source of stress (trust and share with; $r = .332$; practical support; $p = .042$; $r = .385$; $p = .017$). Taken together, these results could suggest that the same profession colleagues play an important role in buffering the effects of stress, particularly from multidisciplinary team sources. It is also possible that the more supportive same profession colleagues are of each other, the less participants blame (scapegoat) the multidisciplinary team as a source of stress.

Quantitative analysis of the data supports the hypothesis that there is an interrelationship of professional sources of stress and sources of support. Generally it was found that the more supportive a relationship was, the less stressful it was viewed to be and vice versa. In addition, it was found that support from one collegial source could be related to reduced perceptions of stress for other collegial sources of stress. Qualitative analysis suggested that HIV professionals tended to seek support from the domain that was less stressful (at that point in time). If personal relationships were perceived as stressful, then participants tended to use work relationships for support. If work relationships were perceived as stressful, then participants tended to use home relationships for support. In this study, perceptions of stress and support did not appear to be 'a constant', as proposed by Thorndike (1920). Rather, perceptions of stress and support seemed to be interdependent and influenced by what was going on in the broader interpersonal system for the individual at the time of the study. There appeared to be a tendency for perceptions about stressful and supportive relationships in one domain (group or team) to affect perceptions of stress and support in another. What Thorndike (1920) did not appear to take

account of in his 'halo' analogy, and seems to be an emerging issue in this study, is how the halo may move from one head (group or team) to another. A longitudinal study would have been a more robust way to demonstrate this effect and in particular, how it might change over time.

Qualitative analysis showed that there was a tendency for HIV professionals in one sub-system to seek support from colleagues in another and view a third sub-system as a source of stress. This was especially apparent between sub-teams within the multidisciplinary team. Rolland (1994) has described the tendency for triangulation with two people or groups allying against a third party. He describes triangulation from the client and client's family perspective. He states that "the hospital, health-care team, or one professional, can become the third leg of a dysfunctional triangle and that there may be splitting with competing family factions who may unite against a professional or whole health institution" (Rolland, 1994, p.71).

In this study, it would appear from qualitative analysis that there might be competing factions within HIV services and teams, who may similarly unite against a professional or group of professionals. The reason for observed alliances in this study appeared to be about perceived differences and power imbalance. The sub-systems that allied with each other seemed to do so to exert a greater force on the third sub-system. This process might account for 'scapegoating' the multidisciplinary team as a source of stress. In so doing, sub-systems unite and distance themselves from, or exert influence on, the 'scapegoated' faction of the team.

5.1.6 Client sources of stress and the Maslach Burnout Inventory

Although the multidisciplinary team sources of stress were rank ordered first, client sources of stress were a close second. There were no significant differences between participants' demographic characteristics or team characteristics and perceiving the client as a source of stress. Small numbers of participants may have compromised significant effects, although it is possible that participants viewed levels of client sources of stress similarly. This would be interesting given the range of variables, such as different work-settings and professional relationships, which might influence perceptions of stress from clients. In terms of the effect of client sources of stress on health outcome, there was a significant correlation between clients being perceived as a source of stress and MBI-depersonalisation scores (41/45: $r = .344$; $p = .032$). As might be expected the greater the clients were perceived as a source of stress, the higher the depersonalisation scores were likely to be (Maslach & Jackson, 1986). There was not, however, a correlation between client sources of stress and MBI emotional exhaustion or personal accomplishment. These results are surprising given that the three MBI sub-scales are designed to tap client sources of stress and burnout. The wording of the items for each sub-scale, however, might account in part for these discrepant results. The depersonalisation scale specifically identifies 'recipients' (clients), whereas the other two scales could tap stress emanating from other occupational sources of stress more generally. However, client sources of stress did not appear to impact on other health outcome measures either. In particular, client sources of stress were not associated with clinical caseness on the GHQ-12; unlike multidisciplinary team sources of stress.

Although client sources of stress were rated lower than multidisciplinary team sources of stress and were not found to be related to 'caseness', the importance of client sources of stress should not be overlooked. The means for multidisciplinary and client sources of stress were sufficiently similar to reinforce the importance of assessing client sources of stress in HIV care work (Maslach & Jackson, 1986). HIV service-related stress, however, may be a much broader concept warranting broader assessment and interpretation.

5.1.7 The impact of the client's family on staff stress and burnout

Clients' families are somewhat overlooked in the literature as a source of stress for HIV professionals. For some HIV professionals, however, the family can be a greater source of stress than the client. For others, the family is the client. Unlike client sources of stress, there was a significant difference between participants' characteristics on perceiving the client's family as a source of stress. Participants who had a health professional training qualification (27/37; 73%; mean = 3.47, sd = 1.34) scored significantly higher on perceiving the client's family as a source of stress, compared with those without such training (10/37; 27%; mean = 2.46; sd = 1.61) ($F = 4.113$; $df = 1$; $p = 0.05$). This effect is likely to be related to the fact that the qualified HIV workers were predominately ward-based nurses who would come into contact with clients' families as part of routine work and visiting times. The family of clients who were in hospital, might be more stressful for staff to encounter because they are more anxious or aggressive when their loved ones are acutely ill. HIV community professionals may come into contact with the families as part of home visits, but the clients are not necessarily acutely ill at the time, or having

life saving medical treatment. One participant, for example, described how she asked the brother of a very ill HIV patient, who was standing outside the ward cubicle, if everything was alright. She then described how the brother shouted at her saying "of course things are not alright, my brother is dying, what do you expect?" The ill client, for her, was not a source of stress, unlike the brother who distressed her enormously.

In this study, there was a significant correlation between MBI-depersonalisation scores and clients' families being perceived as a source of stress. The greater the clients' families were perceived as a source of stress, the higher the depersonalisation scores were likely to be (41/45: 91%; $r = .362$; $p = .024$). The above example, although anecdotal, shows how caring for the client's family can be just as stressful as caring for the client. The MBI depersonalisation scale might tap depersonalisation associated with the family, because it uses the term 'recipient', rather than 'client'. As has been stated, for some HIV professionals, the recipient would include the family. There may therefore be variability in interpretation of the items on the depersonalisation sub-scale. Although this study was not predicting a relationship between clients' families sources of stress and health outcome of staff, the possible effect on depersonalisation scores is important. The family may also provide a source of reward that buffers the effects of stress for staff (Bennett, Ross & Sunderland, 1996). The impact the client's family has on HIV professional stress and burnout needs to be considered and addressed in the HIV stress and burnout literature more fully.

5.1.8 The role of the HIV professional's partner, family and friends

A number of studies have shown a link between lack of home and family support and burnout (Cherniss, 1980; Farber, 1983; Freudenberger & Richelson, 1980). In this study, there was a significant correlation between Perceived Stress Scale (PSS) scores and perceiving the partner as a source of stress ($r = .397$; $p = .027$). The more the partner was perceived as a source of stress, the higher the PSS stress scores were likely to be. Length of time with the partner was not related to differences in perceived stress scores. It was not possible to investigate differences between heterosexual and homosexual relationships because of the small number of participants. This result might be also linked to the finding that homosexual males (12/37; 32%; mean = 1.67) scored significantly lower on viewing their partner as a source of stress compared with heterosexual participants (21/37; 57%; mean = 2.7), and lesbian participants (4/37; 11%; mean = 2.75) ($F = 3.738$; $df = 2$; $p = 0.024$). Qualitative data suggested that the significant difference seemed to be related to the relatively long-term, stable and supportive nature of the partner relationship for homosexual men in this study.

There was a highly significant correlation between partner sources of stress and perceived emotional and social support from the partner for the total sample of participants (41/45; 91%; trust and share with; $r = 6.697$; $p = <.0001$: lean on/turn to; $r = -.626$; $p < .0001$: social support; $r = -.556$; $p = .002$). This suggests that partner support was directly related to perceiving the partner relationship as less stressful, but not so for other interpersonal sources of stress. Similarly, the greater the discrepancy between ideal and actual emotional support received from the partner, the more the partner was viewed as a source

of stress. Taken together, these results suggest that partner support may act as a stress buffer, or even stress reducer, but only for partner sources of stress. This is contrary to other studies that have identified partner support as a stress-buffer for occupational stress (Cooper & Davidson, 1987). Methodological and cohort differences may account for these discrepant results. The current study investigated the stressor and buffering effects of partner relationships and not support alone. Partner support was also studied here in relation to the stressor and buffering effects of other important relationships in the health care system. These differences in 'context' may have influenced interpretation of the results.

The stress-buffering role of family and friends was also considered. There were no significant differences between participants' characteristics on perceiving the participants' 'family and friends' as a source of stress. There were also no significant correlations between support from family and friends and perceptions of sources of stress. It would appear that support from family and friends was not related to reducing perceptions of sources of stress in this sample. Again this runs counter to the expectation that support from these significant others would buffer work-stress (Cooper & Davidson, 1987; Leiter, 1990). In this study it would appear that only collegial support was related to reduced perceptions of stress from interpersonal relationships at work. Other studies have also found no relationship between support from family and friends and burnout (Russell, 1986; Golembiewski et al., 1991).

5.1.9 Summary of occupational sources of stress, support and health outcome

In this study the main (ranked first) source of perceived stress for HIV professionals was from multidisciplinary team colleagues. Multidisciplinary

team sources of stress were also found to be associated with increased GHQ caseness. This may indicate that multidisciplinary team sources of stress impact negatively on staff physical/psychological health. It may also be that the people with higher GHQ scores in this study, tended to rate adversely (if not contribute to) the multidisciplinary team as a source of stress. It cannot be concluded, however, that collegial relationships are more stressful than client sources. This is because the means for the stress ratings were similar for client and collegial sources of stress. In addition, MBI depersonalisation scores were found to be related to client and client's family sources of stress. It was therefore concluded that collegial, client and client's family relationships were all identified as important interpersonal sources of stress for the HIV care professionals in this study.

Social support from colleagues, but not partner, family and friends was linked to reduced perceptions of stress. In particular, manager support was associated with decreased perceptions of stress from the manager, same profession and multidisciplinary team colleagues. Same profession colleague support was associated with decreased perceptions of stress from the multidisciplinary team. The same profession colleagues might play a part in buffering multidisciplinary team sources of stress. Multidisciplinary team support, however, was only found to be related to reduced perceptions of stress from multidisciplinary team sources.

It was concluded that multidisciplinary teams might have been viewed as more stressful for two main reasons. Firstly, qualitative analysis showed that they tended to lack clear leadership structures, have increased internal competition for resources (money, clients, power and status), have increased task and role

ambiguity, tended to focus negatively on perceived differences in professional approach and have poor communication. Multidisciplinary team colleagues tended to conflict and compete with one another, rather than realise the team's potential for complementary working relationships and supporting each other.

The second reason the multidisciplinary team may have been perceived as more stressful was because it attracts blame. In this study it was found that the role the multidisciplinary team might have in buffering stress was more likely to be as a 'scapegoat,' rather than as a direct source of support. By focusing on the failings of the multidisciplinary team to be supportive, other relationships might have appeared less stressful. The ripple effect of blaming the multidisciplinary team appeared to be one of uniting some profession colleagues. Blame in organisations splits some factions and unifies others (Stockton, 1996). The fluidity of affiliation and dissociation of relationships gives an organisation, or team, flexibility. This is important for organisational change and adaptation to the cultural, political and medical contexts of HIV service provision. As with physical structures, if the organisation is too rigid, it may risk brittle fragmentation. Too volatile and it may risk 'auto-combustion'. Lack of clarity and ambiguity of roles and responsibilities were chief problems identified as contributing to the collapse of the AIDS organisation, Frontliners (Moreland & Legg, 1991).

It was not possible to conclude from this study whether the multidisciplinary team was more stressful for participants, or a 'scapegoat.' There was evidence in this study to suggest that both may in fact be relevant. The importance of collegial relationships in the mediation of organisational stress in HIV services was supported by this study and points to the need for developing organisational

approaches to stress management. It would be important to assess the organisation as a whole in order to understand how the component departments, teams and individuals 'fit' together and interrelate. Intervening in one part of the organisation is likely to impact on other parts. It may also be that in order for interventions to be effective, wider issues for the organisation need to be addressed first. An organisational stress management programme would broadly aim to assess the interrelationship of sub-systems in HIV services. Promoting positive collegial relationships and improving HIV professionals' understanding of organisational and team processes would aim to increase team functioning and performance. This may reduce staff stress and the perceived need to 'scapegoat' others. The sub-teams could become more united and supportive of each other and develop complementary working relationships without needing to externalise blame to achieve this. Improved team and organisational functioning is likely to impact positively on staff health, morale, sense of achievement, quality of service provision, and the service users.

5.2 Personality, stress and teams

The MBTI personality questionnaire was used to assess the personality profile of the HIV teams. This was in order to predict and describe how personality interactions might be related to stress in teams. This personality assessment tool was also selected for its use as a team development tool. If personality type was found to be related to stress in teams, then team development might provide a method for reducing stress and increasing support from colleagues.

It was hypothesised that MBTI personality type differences within teams might account for sources of conflict and stress. It was also predicted that participants

under high levels of stress might shift personality type preferences from feeling (F) towards thinking (T), which is a more detached, less emotionally-driven style. This would mean that they would tend to cope with demands in a more depersonalised way. It was not expected that there would be a particular HIV professional type although it was found that many of the participants who were assessed on the MBTI had preferences for intuition (N).

The community, voluntary and management teams all completed the MBTI personality assessment. Best-fit and reported types were obtained. In order to test these hypotheses, qualitative data from interview and observation was used as 'evidence' to support or refute predictions. These descriptions are covered in some length in the results section and will not be reiterated here. Rather, the themes emerging for each team from this analysis will be summarised.

5.2.1 Creativity and HIV service development

The majority of HIV professionals in this study who were assessed for MBTI personality type had preferences for intuition (N) which means they would enjoy applying their creative and conceptual thinking to starting-up and developing HIV services and projects. They may be less interested in the maintenance aspects of service provision. They may also feel especially frustrated and constrained if their work does not provide them with the opportunity to utilise their intuition (N) preferences (Quenk, 1996). In a study of 80 male managers, there was a relationship between burnout using the MBI and creativity using the Consequences Anticipation Test and Test of Divergence Thinking. It was found that those managers who had high burnout were less able to perform creatively (Noworol, 1993). An alternative interpretation of these researchers' results is

that less creative individuals may be more prone to burnout. In the current study, the sample comprised mostly creative types and it is possible, according to Type theory, that if this were their dominant function, under stress they would tend to use their sensing (S) function in a dysfunctional way. This would disable individuals' creative flair and they would tend to focus on detail and blow it out of proportion under stress (Quenk, 1996).

Numbers of participants in this study were too small for quantitative analysis of personality and perceptions of stress and health outcome. It was noted, however, that the lowered self-efficacy scores for HIV professionals who had been in the speciality for longer might reflect a decrease in their perceived ability to be creative in their work. They may also have felt more frustrated and less satisfied with their work and this may be associated with the lower scores for personal accomplishment in this study compared with the cohort in Miller's study (1995a). Recent changes in HIV services related to combination drug therapy effectiveness might have provided less opportunity for these HIV professionals to apply their intuitive (N) preferences. They may have come into the profession historically to be entrepreneurial and innovative when services were in the early stages of rapid development. The constraints and limitations to make choices, plan and expand projects would be particularly difficult for people with a preference for intuition (N). Qualitative analysis of individuals supported the idea that many felt frustrated by recent service changes and that this had narrowed their options and creative possibilities.

5.2.2 Personality differences

Personality differences which appeared to be a particular source of conflict and stress in the assessed HIV teams, were between introverted-thinking and extroverted-feeling (IT and EF) types and sensing-judging and intuition-perceiving (SJ and NP) types. Introverted-thinking types tended to find their extroverted-feeling type (EF) colleagues to be overly and outwardly emotional in their communication of their views and making decisions. The introverted-thinking (IT) types preferred time to think things through, reflect and apply logical analysis when problem-solving or making decisions. This was often misconstrued by the extroverted-feeling (EF) types as a detached and aloof stance, showing lack of concern for the feelings of others and a slowness in giving their view or decision on a matter.

With regards to intuition-perceiving (NP) and sensing-judging (SJ) differences, participants with a preference for intuition-perceiving (NP) tended to find their sensing-judging (SJ) colleagues to be overly concerned with structure, procedures and closure. They would find this constricting and routine. Conversely, sensing-judging (SJ) participants tended to find their intuition-perceiving (NP) colleagues to be intellectual rather than practical; caught up in theory and abstract ideas rather than being grounded in the real world.

In terms of team development, introverted-thinking (IT) types need extroverted-feeling types (EF) and vice versa to have a balanced approach to communicating problems and decision making. Likewise, sensing-judging types (SJ) need intuitive-perceiving types (NP) and vice versa to give creativity and practical

application to a team (Hirsh & Kummerow, 1990). The teams seemed to be better able to see how they differed, rather than how they might complement one another. If the teams were to focus on the complementary nature of personality differences, then members would be in a better position to understand others' approaches to work and value diversity in teams. The roles of individuals might also need to be modified to accommodate or develop personality preferences.

5.2.3 Shift in personality type preferences under stress

In a study by Cooley and Keesey (1981) of 136 students, they found that students who had a preference for introversion, sensing and thinking (IST) reported more illness than participants with a preference for extroversion, intuition and perceiving (ENF). Introverts were found to be more susceptible to stress from daily hassles. This may be linked to the finding in another study that extroversion (E) was associated with sensation-seeking, assertiveness and social hardiness (Khasla, 1991). In Khasla's study the E-I scale was the best predictor of stress and coping and the only scale to be associated with perceptions of coping rather than perceptions of stress. In the current study, no team was found to have significantly higher sick leave rates or coping skills. Coping in this study was also not found to be associated with health outcome. The E-I scale quantitative and qualitative data, however, suggest that shifts from extroversion to introversion that occurred for 5/9 (56%) participants in the voluntary team might have been stress-related. Factors which may have contributed to this team being more susceptible to stress include the large ratio of unqualified staff for this team compared with others. Being unqualified was found to be significantly related to higher GHQ caseness and Perceived Stress Scale scores. Eight out of nine of the members of the HIV voluntary team were

'non-qualified' whereas all but one of the remaining participants in the study had a relevant health care qualification. The voluntary team may have also been less well supported because they were more isolated as a community based team. Participants who were community based perceived the multidisciplinary team to be significantly more stressful compared with hospital based participants. There is a confound, however, in that hospital-based participants were mainly qualified nurses and unidisciplinary. From earlier discussion, it was suggested that same profession colleagues might be more supportive of each other, especially if they are uniting against something else.

In a study by Miller and Cooley (1981), 124 students were assessed for personality type preferences, life events and physical health problems. People with preferences for introversion (I), thinking (T) and judging (J) were found to have increased reporting of health problems. The authors interpreted this finding to reflect poor adaptability to stress. In a study by Ware, Rytting and Jenkins (1994), however, it was observed that the students tended to shift preference from extroverted, intuition, feeling (ENF) towards introverted, sensing, thinking (I S T) under stressful conditions.

In the current study it was evident that the voluntary team, who had significantly higher MBI-emotional exhaustion and GHQ-12 caseness scores compared with the community and ward-based teams, also had predominately introverted, thinking, judging (ITJ) reported personality type preferences. 6/9 (67%) had preferences for INTJ. Five out of the six people with an INTJ preference, had different best-fit types. Both the emotional exhaustion and Perceived Stress Scale were found to correlate with GHQ-caseness, although the voluntary team was not found to have significantly higher levels of GHQ caseness compared

with the other teams. These results support the hypothesis that individuals in the voluntary team may have shifted personality preferences because they were more stressed. Qualitative analysis of this team suggested that some of the participants may have been 'in the grip' (Quenk, 1996). This means they would be using their inferior personality function, which is their least well-developed function, under stress. Given the 'immature development' of the inferior function, its emergence under stress is associated with pathological behaviour patterns.

The HIV voluntary team: If participants in the HIV voluntary team were under stress, as the quantitative and self-reports suggested, then the interpretation guide (Quenk, 1996) would predict that others might see;

- an obsessive focus on external data and
- adversarial attitude to outer-world

Specific triggers would include dealing with details, unexpected events and excessive 'extroverting'. The method for re-establishing equilibrium for INTJ's would be;

- time alone to recharge
- lightening usual schedule
- avoidance of others of giving advice or suggestions

Qualitative data obtained from this team supported this profile. In particular it was noted that when this team was given suggestions, they were negative, critical and unyielding which can be characteristic of INTJ personality types

(Hirsh & Kummerow, 1990). They identified excessive workload, particularly paper work and procedures as being a major source of stress. They also identified that they were disconnected from one another and 'not really a team at all'. The published interpretations are based on research and could provide an organisational approach to managing stress. It may be more useful to give the team feedback about their interpersonal style and how stress may have affected their team-working rather than make specific suggestions about how to change. According to the above, suggestions would be better avoided to help the team re-establish equilibrium.

5.2.4 Summary of personality and stress in teams

It was concluded that the MBTI personality assessment results were useful to predict interpersonal sources of stress and conflict in the HIV teams. Individual and team type could point to areas for development and the potential for complementary working relationships between colleagues. The potential for using MBTI personality assessment for team development was also viewed positively. In theory, it could provide an organisational approach to managing stress in teams, by reducing misunderstanding about members preferences for style of working and increasing appreciation of diversity and the potential for collaborative working practice. The MBTI may also be useful for understanding how stress may influence preferences and shifts in reported/best-fit type. It could not be used, however, as a tool to assess stress in teams for validity, reliability and ethical reasons. Observed shifts in type for individuals or teams may, nevertheless, alert the assessor to explore 'misfits' between individuals and the team, or organisational, culture and stress for these individuals.

5.3 Coping with stress

Coping with stress was predicted to be related to perceived changeability of the problem, self-efficacy, coping strategy selection and social support. Social support has already been addressed in the discussion and attention will now be given to changeability of the problem and coping effectiveness and self-efficacy.

5.3.1 Changeability of the problem, sources of stress and coping

Participants were asked to describe the most stressful incident that had happened at work in the month prior to the study and asked to rate whether they believed the problem to be changeable and why. 21/43 (49%) reported interpersonal problems with colleagues as the major source of stress in the previous month. 10/43 (23%) reported client related problems as the most stressful event in the previous month. 9/43 (21%) reported problems with their manager/s as a major source of stress. 3/43 (7%) reported problems with clients' families as the major source of stress. This would support the hypothesis that collegial relationships were a greater source of stress, for this sample, than client sources of stress.

Changeability of the stressful situation participants described in the questionnaire was found to correlate significantly negatively with perceiving the multidisciplinary team ($r = -.39$; $p = .033$) and the manager ($r = -.418$; $p = .022$) as a source of stress. The less changeable the stressful problem at work was viewed to be, the more likely the multidisciplinary team and manager were viewed as a source of stress. Significant effects were not found for same

profession colleagues. There was a positive correlation between three coping methods and rating the multidisciplinary team as a source of stress and the manager as a source of stress. These were active coping ($r = .343$; $p = .038$); planning ($r = .398$; $p = .015$) and humour ($r = .372$; $p = .023$) for multidisciplinary sources of stress and active coping ($r = .434$; $p = .006$); planning ($r = .399$; $p = .013$) and humour ($r = .445$; $p = .005$) for manager sources of stress. The same three coping methods were found to be relevant for both manager and multidisciplinary team sources of stress, but not same profession colleagues. It may be that active coping, planning and humour are used to cope with unchangeable problems, or, unchangeable managers and multidisciplinary team colleagues. It also seems that manager and multidisciplinary relationships may be different or distinct in some way, from same profession colleague relationships. This distinction was also demonstrated in the cluster analysis; where same profession colleagues were in a different cluster to the manager and multidisciplinary team cluster (p97). The MBTI data and qualitative analysis suggested that perceived differences in personality were more central to problems between same profession colleagues compared with multidisciplinary team colleagues. Same profession colleagues in this study appeared also to be more united as a group and not in competition with each other. In contrast, the multidisciplinary team and managers tended to conflict around task and role ambiguity, leadership issues, power issues and service survival.

5.3.2 Do congruent-copers cope better than non-congruent copers?

Coping effectiveness is believed to be enhanced when there is greater congruency or 'goodness-of-fit' between changeability of the stressor and kind of coping strategy used (Folkman et al., 1991). Although it is possible to apply

problem or emotion focused coping strategies for a range of problems, coping effectiveness is optimised when there is congruence between adopting emotion focused coping strategies for unchangeable aspects of the stressor and adopting problem focused coping methods for changeable aspects of the stressor. Coping effectiveness and stress prevention is derived through increasing the individual's ability to;

- i) appraise appropriately the changeability of stressors and
- ii) enlist congruent coping methods

This may include developing new coping skills to extend personal repertoires (Folkman et al., 1991). There is some evidence to support coping effectiveness theory based on an intervention study conducted by Folkman and Chesney (1993) with HIV positive individuals. They compared coping effectiveness training with an information-giving control group and found that individuals who received coping effectiveness training had significantly reduced stress and depression scores.

In the current study, participants' situational coping styles were assessed. Those who predominately adopted a problem focused approach to changeable problems and an emotion focused approach to non-changeable problems were identified as 'congruent copers'. Those participants who tended to adopt a problem focused approach to unchangeable problems and an emotion focused approach to changeable problems were identified as 'non-congruent copers'. It was predicted that congruent copers would have significantly lower health outcome measures. This was not supported in the study but number of participants for this analysis was small ($n = 17$). Although there was no

evidence that congruent copers had lower stress levels compared with non-congruent copers in this study, there was one scale, however, that warrants attention and that was for the use of alcohol. Non-congruent copers (7/10; 41%; mean = 11.8; sd = 3.24) were significantly more likely to use alcohol as a coping method compared with congruent copers (10/17; 59%; mean = 6.3; sd = 5.25) ($F = 6.134$; $df = 1$; $p = .026$). Given that alcohol use for stress reduction is itself an emotion-focused strategy, then it might follow that non-congruent copers would be more likely to use it because they are more likely to feel that their coping methods are not effective to bring about change. Use of alcohol to cope with life events has been documented in the literature, but not in the context of coping effectiveness theory (Linsky, Straus & Colby, 1985). Tension reduction theories of alcohol use, as a means of reducing anxiety, have produced mixed results. There is evidence however to demonstrate that alcohol use tends to increase after uncontrollable stress (Volpicelli, 1987). The findings in the current study are consistent with this interpretation. Non-congruent copers typically try to change the unchangeable and do not attempt to change the changeable. As such they are likely to feel helpless and unable to effect change and reduce the stress. Higher levels of alcohol use for non-congruent coping individuals in this study may be specifically related to their perceptions of uncontrollable stress. It may be that they were generally unable to match coping resource to type of stressor in an effective and congruent way. Further study would be required to explore the relationship between use of alcohol and coping effectiveness in HIV professionals. The impact this may have on self-efficacy, performance, perceived stress, participant health and safety and client care would also require investigation.

It is possible that significant results may have been obtained with increased numbers of participants for this part of the study. It therefore can not be assumed that coping effectiveness training, as a method for stress management, should be overlooked. It would be necessary to repeat this part of the study with larger numbers to test the hypothesis more rigorously.

5.3.3 Self-efficacy

Self-efficacy may be an important cognitive mediator for coping with stress. Cherniss has suggested that it is an under researched variable which might unify many of the disparate approaches to understanding occupational stress (Cherniss, 1993). How the HIV professional copes with stressors not only depends on the range of personal and organisational coping resources available to him, and matching the right kind of coping response to a given problem, but also in his belief (self-efficacy) in his ability to access and execute the coping response successfully. In this study it was predicted that self-efficacy would be related to increased coping and decreased stress levels. There were no significant correlations between self-efficacy and health outcome. It was found, however, that self-efficacy tended to be lower for participants who had been in the HIV speciality for longer (38/45; 84%; $r = -.378$; $p = .023$) and who had qualified longer (38/45; 84%; $r = -.490$; $p = 0.005$). It is not clear from the results why this should be so, but the effects were not found to be associated with age. It is possible that perceptions of not being able to cope with the changes and demands in HIV services, has reduced self-efficacy. In turn, lower self-efficacy is likely to reduce belief in one's ability to cope successfully and effectiveness of coping and so on. In a study by Cherniss (1990) it was found that individuals who have a strong organisational efficacy, which is a belief in

their ability to influence social and political forces in the organisations, were better able to overcome early career stress and be resilient to burnout. In the current study, reduced self-efficacy did not correlate with personal accomplishment. It was observed, however, that multidisciplinary team sources of stress were associated with higher stress ratings and lower support ratings for participants who had been in HIV speciality for longer. In addition, manager sources of stress were also found to be rated more highly by staff who had been in the HIV speciality for longer. Stressful collegial relationships may have contributed in some way to reduced self-efficacy.

Manager and co-worker relationships are described by Cherniss as being in the interpersonal domain of professional self-efficacy (as opposed to the organisational efficacy domain). Cherniss suggested that in the helping professions, interpersonal self-efficacy is closely related to task self-efficacy (Cherniss, 1993). In other words ability to perform the task of health care depends on the individual's ability to have effective relationships with significant others. In particular this would include co-workers and managers/supervisors as well as clients. If task, interpersonal and organisational efficacy reduces stress and burnout, as Cherniss suggested, then stress management intervention might focus on increasing professional self-efficacy. Applying Bandura's seminal work on this topic would point to developing mastery and vicarious learning experiences for individuals (Bandura, 1982; Cherniss, 1993). The question of how one can ensure these positive experiences in the work place, however, remains unanswered. It would seem likely that organisational development, management development and team building might all feature as a pre-requisite to providing an environment in which one can develop and observe effective performance. Cherniss concluded that training is

most inadequate in teaching knowledge and skills about how organisations work and how one can be effective within them. He proposes that future research should evaluate programmes designed to increase professional skills to deal with organisational problems and assess their impact on self-efficacy and burnout.

5.3.4 Summary of stress and coping

Contrary to prediction based on coping effectiveness theory, congruent copers were not found to have significantly different health outcome measures compared with non-congruent copers. This may be accounted for by small numbers of participants in the analyses, rather than lack of effects. Non-congruent copers, however, were found to use alcohol significantly more to cope with the specific occupational stress incident obtained by self-report in this study. This may have staff health implications (and safety implications if it impacts on performance at work). Coping-effectiveness training may be a useful strategy for promoting coping with stress but there was no evidence in this study to demonstrate the link between congruency of coping and health outcome. This may be because of methodological limitations rather than lack of effects.

The reduced self-efficacy for staff who have been in the HIV speciality for longer might compromise their perceived ability to cope because they may have lowered expectancies. On the other hand, it may be that problems with coping may have eroded self-efficacy over time. Chronic stressors over time might include increasing stressful relationships with manager and multidisciplinary colleagues and decreasing support from the multidisciplinary team.

Promoting self-efficacy may be useful to promote coping, by increasing the individual's belief in his/her ability to cope. Self-efficacy scores may have reduced for participants who had been in the HIV speciality for longer, for a number of reasons. It may be linked to a reduced sense of personal accomplishment, which was also found to be lower for participants who had been in the HIV speciality for longer. HIV professionals may have felt more demoralised and less rewarded by their work because of substantial changes in HIV service resources, provision and client contact. They may, for example, be involved less in the creative aspects of service planning and decision making. HIV professionals who moved into the speciality in the 1980s and early 1990s for personal and professional reasons may find these objectives no longer fit the prevailing tide in HIV services.

The final section of the discussion focuses on stress and health measures for the participants in this study and compares them with a previous study investigating stress and burnout in HIV professionals. In particular, consideration is given to HIV service developments which have taken place in recent years.

5.4 Organisational stress and participant morbidity

5.4.1 A comparison of occupational morbidity with a previous study

Occupational morbidity for this study included assessing burnout using the Maslach Burnout Inventory, the General Health Questionnaire and sick leave rate, similar to measures used in Miller's study (1995a). In addition the Perceived Stress Scale and Generalised Self-efficacy scales were used in the

current study. The findings from this research study have been compared where possible to Miller's results, but reliable comparisons are compromised because of cohort and methodological differences in the studies. Nevertheless, the HIV professionals in both studies came from similar settings and professional groups. A major difference between the two studies, however, is the organisational effects of combination anti-retroviral therapies. These treatments have helped considerably in slowing down disease progression for many HIV infected individuals (BHNA, 1997). As a result, HIV service structure and resources have changed. In many services, client contacts have reduced and the opportunity for the 'rewards of caring' may similarly have decreased. In addition, other organisational sources of stress have increased substantially. If there were considerable changes in the morbidity profile between these two cohorts, then this might reflect the stressful effects of HIV service changes. In particular, it was predicted that emotional exhaustion and personal accomplishment burnout scores and GHQ-12 scores might be high, but that depersonalisation scores, which are 'recipient' specific, might be lower compared with scores obtained in Miller's (1995a) study.

5.4.2 General Health (GHQ)

Miller (1995a) used the General Health Questionnaire in his study although it was the 28-item version. GHQ-12 caseness numbers (11/42: 26%) in this study compared with GHQ-28 caseness numbers (40/103: 39%) obtained in Miller's study suggest that proportionally, more participants in this study were functioning below caseness cut-off compared to Miller's sample (Miller, 1995a: see Table 5.4.2 below).

Table 5.4.2 A comparison of GHQ caseness scores for participants in this study and Miller's (1995a) study.

GHQ caseness	Current Study n = 42	Miller's study (1995) n = 103
no caseness	31 (74%)	61 (60%)
Caseness	11 (26%)	40 (40%)

A reliable interpretation of the lower numbers of caseness in the current study is compromised because of differences in methodology, cohort and version of the GHQ questionnaire used. With this in mind, however, the reduction in percentage numbers of participants achieving caseness could be consistent with a decrease in pathology associated with caring for individuals with HIV (Catalan et al., 1996). Specifically, lower GHQ scores might reflect reduced client sources of stress relating to reduced client contact. Contact time was not measured in the current study but rather inferred from qualitative analysis. It could also be that the sample used in Miller's (1995a) had more psychopathology.

In the current study, there was a highly significant correlation between the MBI-emotional exhaustion measures and the General Health Questionnaire-12 measures using the likert method of scoring the GHQ-12 ($r = .52$; $p = <.0001$) and the caseness method ($r = .49$; $p = .001$). The higher the levels of emotional exhaustion, the higher the caseness scores tended to be for participants. There was also a significant negative correlation between the MBI-personal accomplishment scale and the GHQ-12 (caseness) scores ($r = -.34$; $p = .031$). As this was a reverse score scale, the lower the sense of personal accomplishment (high burnout), the higher the GHQ caseness scores tended to be. It might be expected that the higher GHQ caseness scores in Miller's study would therefore correspond with increased personal accomplishment burnout

scores. This was not the case. On the contrary, Miller's study suggests that his cohort had lower levels of personal accomplishment burnout and higher levels of GHQ caseness compared with this cohort (Miller, 1995a).

The source of stress measure in the current study that correlated with GHQ-12 caseness was multidisciplinary team sources of stress. Multidisciplinary team sources of stress did not correlate, however, with MBI-emotional exhaustion or MBI-personal accomplishment scales. It was therefore not clear what may have influenced the change in MBI profile for HIV professionals in this study compared with the profile obtained in Miller's study (1995a).

5.4.3 Perceived stress

The Perceived Stress Scale was not used in Miller's study and therefore comparisons can not be made. In the current study, however, there was a highly significant correlation between the MBI-emotional exhaustion measures and the Perceived Stress Scale measures ($r = .56$; $p < .0001$). As there are no published cut off points, it is not possible to assess the clinical relevance of the PSS scores. The standard deviation was large for this sample suggesting a high degree of variability in perceived stress scores. PSS scores correlated with partner sources of stress. This might suggest that the PSS scale was more sensitive to partner sources of stress (and support).

5.4.4 Self-efficacy

Self-efficacy was not measured in Miller's study and therefore comparisons are not possible. The main observation about self-efficacy in the current study was

that it tended to be lower for participants who had been in the HIV speciality for longer ($r = -.378$; $p = .023$) and who had qualified longer ($r = -.490$; $p = 0.005$). Age was not a factor. Causality is not known and nor was this a longitudinal study, but this finding may suggest that self-efficacy may have decreased over time. It is possible that lowered self-efficacy is related to decreased coping (reduction in belief in one's ability to cope successfully), depressed mood, low morale, boredom and occupational burnout (Drexler et al., 1994; Bandura, 1982; Cherniss, 1993). These factors were not specifically measured, but it was observed that multidisciplinary team sources of stress were associated with higher stress ratings and lower support ratings for participants who had been in HIV speciality for longer. The manager was also rated more highly as a source of stress by staff who had been in the HIV speciality for longer. If multidisciplinary team relationships deteriorate over time, as speculated above, then this might increase emotional exhaustion, erode self-efficacy and lower individuals' sense of personal accomplishment. It has been proposed by Lee and Ashforth (1990) that self-efficacy is at the core of personal accomplishment. Individuals who feel unappreciated and ineffective will have lowered self-efficacy and personal accomplishment. Ambiguous performance feedback (Bandura, 1982) and role ambiguity (Jackson et al., 1986; Schwab & Iwanicki, 1982) have both been linked to reduced self-efficacy. Change may also be related to decreased self-efficacy because it involves uncertainty and a lack of reinforcement of 'knowing what one is doing' (Cordes and Dougherty, 1993).

In a study by Leiter, pleasant co-worker relationships were associated with increased sense of personal accomplishment and unpleasant co-worker relationships with increased emotional exhaustion (Leiter, 1988). In another study by Leiter, lack of support from co-workers was related to increased

depersonalisation and decreased personal accomplishment (Leiter, 1991). In the current study, from analysis of individual questionnaires, there was a trend for participants who reported higher levels of multidisciplinary team stress to have moderate-high MBI personal accomplishment and emotional exhaustion scores and low depersonalisation scores. Depersonalisation would not be expected to relate directly to multidisciplinary team relationships, but rather to client relationships. It was found that MBI depersonalisation scores were significantly correlated with client and client's family sources of stress. It is possible that participants did not want to complete depersonalisation items in a way that might be construed as negative client care and this accounted for low depersonalisation scores for participants who were experiencing stress from colleagues.

Collegial sources of stress might give a different MBI profile compared with client sources of stress. There are mixed findings with regards to the effect collegial relationships may have on MBI scale scores (Leiter & Maslach, 1988; Schwab & Iwanicki, 1982; Brookings et al., 1985; Jackson, 1983). There was anecdotal evidence in this study to support a profile of moderate to high burnout scores for emotional exhaustion and personal accomplishment but low burnout scores for depersonalisation for staff who reported organisational and collegial sources of stress as the primary source of stress. This association would require further empirical investigation.

5.4.5 Sick leave

In order to assess levels of 'sickness', in this cohort, participants were asked to estimate their total sick leave in the 6 months prior to the study. Staff sick leave was self-reported and may be particularly open to under and over reporting of

days of sick leave, as discussed in the method section (p.73) and found to be a problem in Miller's study (1995a). With this in mind, sick leave for participants ranged from 0 to a total of 18 days during the 6 months prior to the study (42/45; 93%: mean = 3.87; sd = 3.9: median = 3 days: (bi)mode = 0/3 days). 4 participants did not answer the question, which may have made a difference to the overall picture because of the potentially high degree of variability for sick leave for participants. It is also possible that there is a higher proportion of HIV infected or affected individuals in these services who take sick leave for problems unrelated to occupational stress. In one team it was noted that they regarded giving sick leave as a means of 'showing support'. There were no significant correlations between sick leave and other measures obtained in this study which seems unsurprising given the problems with obtaining reliable and valid measures for sick leave rate in this study.

5.4.6 Burnout

13/41 (32%) participants' scores in this study were within the moderate to high burnout range for depersonalisation, 21/41 (51%) participants had scores within the moderate to high burnout range for emotional exhaustion and 30/41 (73%) had scores within the moderate to high burnout range for personal accomplishment. The percentage number of participants in the low burnout and moderate to high burnout categories was compared with the number of participants in each category from Miller's study (1995a). This comparison can be seen in Table 5.4.6. More participants in Miller's study reported moderate to high burnout scores for emotional exhaustion and depersonalisation compared with participants in this study. Fewer participants in Miller's study, however,

scored moderate to high burnout scores for personal accomplishment compared with this study (see Table 5.4.6).

Table 5.4.6 A comparison of MBI burnout categories with Miller's (1995a) study

MBI Burnout Category	MBI-EE n=41	Miller 95 MBI-EE n=103	MBI-DP n=41	Miller 95 MBI-DP n=103	MBI-PA n = 41	Miller 95 MBI-PA n=103
Low	20 (49%)	28 (27%)	28 (68%)	60 (58%)	11 (27%)	47 (46%)
Moderate	21 (51%)	73 (71%)	13 (32%)	42 (41%)	30 (73%)	54 (52%)
High	7 (17%)	36 (35%)	3 (7%)	13 (13%)	9 (22%)	19 (18%)

Differences between the two studies and cohorts prevent reliable interpretation of the results. This may be because of differences in sample size, sample characteristic, study methodology, or differences in time of survey administration (i.e., pre- and post- combination therapy use in HIV services and service changes). It was noted from individual analysis of the questionnaires in the current study, however, that organisational sources of stress tended to correspond with lower burnout scores on depersonalisation and higher burnout scores for emotional exhaustion and personal accomplishment. In contrast, client-related sources of stress tended to correspond with higher depersonalisation and emotional exhaustion scores and variable personal accomplishment scores.

The reduced emotional exhaustion and depersonalisation scores in this study, compared with Miller's study, may be related to reduced client sources of stress (Miller, 1995a). This might be particularly relevant for services in low HIV prevalence areas such as the community HIV team as well as for services who have had a reduction in client numbers (e.g, ward-based HIV team). The fact that personal accomplishment burnout scores have not similarly reduced, but rather increased, may reflect an increase in organisational sources of stress (e.g.,

not client specific) and/or a reduction in the buffering effects of social support (e.g., lack of professional support). Changes in HIV service structure, resources and functioning, following the introduction of combination drug therapies, may be associated with a decrease in sense of personal accomplishment for staff. This may be related directly to change and uncertainty as a source of stress (Cooper, 1983). It may also reflect changes in the task and role of staff, as well as type, or number, of client contacts. Reduced client contact, for some HIV professionals, may also mean decreased opportunities for job-rewards for staff. Job reward has been identified as a potential stress buffer (Catalan, et al., 1995). Qualitative data suggested that organisational 'uncertainty', as well as task and role changes for staff may have been an important contributing factor for reducing personal accomplishment for this cohort. The reduced self-efficacy scores for participants who had been in the HIV speciality for longer in this study are also consistent with this explanation. It is possible that uncertainty and sense of lack of control over the changes in HIV service funding and delivery, has reduced self-efficacy for some staff (Matheny & Cupp, 1983; Wortman, 1975; Jackson, 1986; Landsbergis, 1988).

Reduced self-efficacy may also be related to the other finding in this study that participants who had been in the HIV speciality for longer tended to view the multidisciplinary team as more stressful and less supportive than those participants who had been in the speciality for less time. Qualitative analysis suggested that this might be because internal competition for reduced resources has increased between disciplines and HIV services in recent years. Instead of disciplines pulling together as they did in the early 'crisis' phase of HIV service development, HIV teams may now be tending to pull apart. Superficially, this may seem undesirable and negative. From a systemic perspective, however,

freeing up of existing connections and relationships may be a necessary part of organisational change and the 'team-life cycle'. It may be indicative of a system 'in flux', whilst sub-teams and individuals re-configure in order to adapt to new imperatives (Campbell et al., 1994; Salt, 1998).

The reporting of stress and burnout for participants in this study, although not as high as those obtained in Miller's study on two scales are nevertheless of concern (Miller, 1995a). Firstly, higher scores for personal accomplishment burnout indicate lower levels of personal accomplishment for HIV staff. Secondly, there was a significant negative correlation between the MBI personal accomplishment scale and the GHQ-12 (caseness) scores ($r = -.34$; $p = .031$). This would suggest that the lower the participants' sense of personal achievement at work, the higher their GHQ-12 scores tended to be. It is not possible to know the direction of causality from these results, but reduced personal accomplishment might be associated with compromised physical/psychological health of staff.

The change in burnout profile may be accounted for by sample and methodology differences between the two studies. It may, however, also reflect decreased personal accomplishment associated with changes in HIV service structure and provision, reduced numbers of client contacts or quality of contacts. It may also reflect increased stress and reduced support from multidisciplinary team colleagues, with whom they may be in competition for limited resources. The decline in self-efficacy the longer participants have been in HIV work may also be related to decreased personal accomplishment, although there was not a significant correlation to support this idea.

Increased time in the HIV speciality was associated with an increase in multidisciplinary team and manager sources of stress and a decrease in perceptions of multidisciplinary team, manager and same profession colleague sources of support. Length of time in HIV speciality was also found to correlate significantly with decreased self-efficacy. Taken together, these results may suggest that over time;

- organisational sources of stress may have increased
- organisational sources of support may have decreased
- staff self-efficacy and sense of personal accomplishment may have decreased

As this was a cross-sectional study, it cannot be concluded that these factors are causally related. What is clear, however, is that time in HIV services appears to be a significant factor to consider in the assessment of stress and burnout in HIV professionals. There is a confound in this study, in that increased time in the HIV speciality was associated with increased exposure to reduced funding, service changes and changes in client contact. In particular, participants who have been in the service for more than 6 years joined at a pre-combination drug therapy stage of HIV service development. In contrast, HIV professionals entering the speciality in the past 2 years have joined a new era and may not feel the effects of change in the same way. Historical developments in HIV care confound the results and make it difficult to draw any firm conclusions. Qualitative analysis of team discussions illustrated this issue. It was documented that new staff felt very positive about the service and the staff, whereas longer serving staff were more cynical about team relationships and the future of the service in which they worked. Those who had been in the service

longer explicitly resisted change. Grading did not seem to be a related factor and both senior and junior staff who had been in the service for more than 6 years appeared equally demoralised and negative about the service. Reduced self-efficacy and personal accomplishment for this group of staff was viewed as being related to organisational sources of stress and change over time, rather than as a direct effect of client sources of stress. Participants reported being under stimulated and lacking in client contact, rather than being over-burdened and exhausted from this aspect of their jobs. The exhaustion they identified was from efforts to maintain their service and compete with other colleagues for its survival.

Consistent with this descriptive data was the finding that MBI personal accomplishment ($r = -.34$; $p = .031$) and emotional exhaustion ($r = .49$; $p = .001$) scores correlated significantly with GHQ-12 caseness. Both these scales could have tapped organisational sources of stress. Depersonalisation, which is a more client-focused measure of sources of stress, was not found to correlate with GHQ-12 caseness. MBI emotional exhaustion also correlated with the Perceived Stress Scale ($r = .56$; $p < .0001$). Again the PSS scale is a generalised stress measure and does not identify sources of stress within the items. These results further support the view that this cohort of HIV professionals may have been experiencing stress and burnout from predominately non-client sources of stress.

5.4.7 Summary of occupational morbidity in HIV services

The above results suggest that length of time in HIV care may have affected HIV professionals levels of stress and burnout, as measured by the MBI

personal accomplishment and emotional exhaustion scales and GHQ-12 caseness scores, in a negative way. Client and client's family sources of stress and burnout were better detected in this study by using the MBI depersonalisation scale. Comparison of the profile of these measures was made with results obtained by Miller (1995a). The historical context of HIV service development was considered to be an important factor in the interpretation of the different profiles of morbidity for the two studies. Overall there was a decrease in scores, except for personal accomplishment burnout, which was higher in the current study. Age was not found to be a factor. Cohort and methodological differences may account for these results, but participant characteristics and work settings were similar for both studies. It is possible that the increased personal accomplishment burnout in the current study was related to organisational factors rather than client sources of stress. A major difference between the two studies was the point in HIV service development history when the studies took place. The current study was assessing staff after the introduction of combination anti-retroviral drug therapies into HIV services. In particular, many staff reported a decrease in client contacts, decrease in resources (non-drug treatment), changes in service delivery and team structure compared to a few years ago. They may have felt less rewarded by their client work and more stressed by colleagues.

Many HIV professionals in this study reported being in competition with one another for resources, clients, jobs and ultimately, service survival. Collegial sources of stress and frustrations with service changes may have contributed to personal accomplishment burnout (Leiter, 1988; Leiter and Maslach, 1988; Leiter, 1991). It was also observed that self-efficacy scores were lower for staff who had been in HIV services for longer. This might also reflect a decreased

sense that staff could influence the future of their service, their role in it, and contact with clients (Cherniss, 1993).

5.5 Methodological problems with this study

A major limitation for this study is that it was cross-sectional and interpretation of causality was compromised. Although information was obtained about service development history, this was retrospective and subject to self-report bias. Ideally a prospective study would have been useful to study change in organisations and perceptions of stress over time. Another major limitation of this study was the need to obtain **entire teams**, which meant numbers available to participate were limited. The depth of analysis, involving individual interview, team observation, personality assessment and administration and the occupational stress questionnaire, was time consuming, for both the researcher as well as participants. This also constrained the number of teams taking part. Limited numbers and selection of naturalistic teams meant that some analyses could not be performed, or that some results were ambiguous. There may also have been sample bias in terms of demographic characteristics, or stress levels. In particular confounds were observed between community services that had greater professional diversity compared with the hospital-based services that had larger same profession sub-teams. The voluntary sector team also had mostly unqualified health care staff. Gender differences were also confounded with sexuality and dependent differences. Another problem was making comparisons with normative data. It seems likely that although the sample of participants in this study may have been representative of HIV professionals, they were not necessarily typical of the general population. This means that comparing scores with normative data needed cautious interpretation.

In its favour, however, this study aimed to reflect HIV professionals in the context of work-teams and HIV service development. By selecting HIV teams and observing team behaviour as well as obtaining self-report measures and interview data, a breadth and depth to the quantitative and qualitative analysis could be achieved. It is possible that teams may have responded to the demand characteristics of the study and given biased data, such as focusing on issues for political reasons (Orne, 1960). It is also possible that participants' perceptions were influenced by the process of talking and writing about how clients, colleagues and service developments had affected them. Similarly, from the researcher's perspective, although it was desirable to be involved in all the data collection in order to have a comprehensive overview of the issues and problems for each team, objectivity may have been compromised, at least theoretically. From a systemic perspective, communication and interaction with a system inevitably means that the researcher (or therapist) becomes part of that system and as such the system being observed is no longer the same (Campbell et al., 1994).

5.6 Conclusions and future directions

5.6.1 Sources of stress and support and health outcome

This study aimed to investigate the dynamic context in which stress is mediated in the work environment and the impact it may have on staff health. In particular it aimed to challenge the overwhelming tendency, in HIV stress and burnout research, to focus on client sources of stress. It was hypothesised that collegial relationships would be perceived as more stressful than client relationships, and that this would be moderated to some degree by supportive

relationships with significant others. It was found that collegial relationships were important sources of interpersonal stress for HIV professionals in this study, but perhaps not more important than client sources and indeed client's family sources of stress. It was concluded that the Maslach Burnout Inventory as a sole tool for assessing stress and burnout in HIV professionals would **not** be adequate. This is because the scales are either recipient specific (depersonalisation) or too general, tapping potentially the effects of a variety of organisational sources of stress (personal accomplishment and emotional exhaustion).

The GHQ-12, Perceived Stress Scale and Generalised Self-efficacy measures were all useful to measure aspects of stress and health outcome which are not recipient specific. These measures do not specify source of stress in the underlying theory or item construction. Sick leave rate, however, was not found to be a reliable or valid measure. Distortion of reporting and lack of corroboration was one issue, but why people took sick leave was another. For some HIV professionals, sick leave was viewed as 'time-out' or a way of showing support. Another confounding variable was that some HIV professionals might have HIV or other illnesses, or be caring for a sick person. They may need additional time off for practical, rather than stress related reasons. It would be important in a future study to find a more appropriate measure of 'sickness'. The COPE questionnaire was also not found to be particularly useful in this study. Had there been significant differences between congruent copers and non-congruent copers on the COPE scales, then this might suggest that coping effectiveness training could be an appropriate cognitive-behavioural stress management intervention. The lack of effects, however, was not interpreted to mean that coping-effectiveness theory was flawed. More

likely, problems in the way the COPE questionnaire was used in this study are at fault. Firstly, it was used in its situational rather than dispositional form. Secondly, categorising cognitive copers on the basis of this questionnaire was an applied aspect of this study and not in-built into the design of the COPE questionnaire. Lastly, there were small numbers of participants for this analysis, which may have compromised results.

A repeated finding in this study was the effect the multidisciplinary team might have on stress in HIV professionals. This finding was consistent with Barbour's study investigating major sources of stress for a sample of Scottish HIV health workers (n=139). Almost a quarter of the sample identified multidisciplinary and interagency relationships as the most demanding aspect of their work (Barbour, 1995). In the current study, multidisciplinary team sources of stress were also found to be associated with increased GHQ caseness. Managers, paramedical HIV professionals, women with dependants and the community HIV team, all rated the multidisciplinary team to be significantly more stressful than other participants. Increased length of time in service was also associated with increased perception of the multidisciplinary team as a source of stress and a reduced source of support. From qualitative analysis it was found that multidisciplinary team sources of stress included;

- lack of leadership structure
- perceived differences between individuals and sub-teams
- power imbalance
- role and task ambiguity and overlap
- competition for resources and clients
- poor communication and sharing of information

These sources of stress were reported to be a major source of internal conflict and competition within teams.

On the basis of previous social support studies, it was expected that collegial support would buffer or reduce stress for HIV professionals in this study. It was found that manager support was related to reduced perceptions of stress from manager, multidisciplinary team and same profession colleagues, but not the client or client's family. Same profession colleague support appeared to be strongly related to reduced perceptions of the multidisciplinary team as a source of stress. Support from the multidisciplinary team, however, did not appear to have a systemic effect but was related specifically to reducing perceptions of stress from multidisciplinary team sources only. It was also observed that when there was a discrepancy between actual and ideal support, that interpersonal relationships may be viewed as more stressful. In particular, wanting more support from the manager was associated with increased perceptions of stress from the manager, multidisciplinary team and same profession colleagues. Wanting more support from same profession colleagues was associated with increased perceptions of the multidisciplinary team as a source of stress. One interpretation of these findings was that it might reflect the importance of support from same profession team colleagues and supportive management practices in buffering, or decreasing stress, within the wider system. Secondly it may be that when relationships become more stressful in the wider system, the manager or same profession colleagues are looked to for more support and this increases the perceived discrepancy between actual and ideal support. Thirdly it is possible that perceived multidisciplinary team support is only effective in reducing perceptions of multidisciplinary team sources of stress because the

multidisciplinary team is a 'scapegoat' for systemic sources of stress. It was found that the greater the discrepancy between actual and ideal support from the multidisciplinary team, the less likely the client, same profession colleagues and family and friends were rated as a source of stress. The more support that was wanted from the multidisciplinary team, the less likely other significant relationships were viewed as a source of stress. The multidisciplinary team may buffer stress by being the 'organisational scapegoat' and attracting attention away from other interpersonal sources of stress. Identifying the multidisciplinary team as a source of stress also appeared to have another positive effect of uniting same profession colleagues with each other and decreasing intra-team conflict. Conversely, in the absence of focusing on multidisciplinary team issues, it was observed that the same-profession sub-teams tended to focus on themselves and perceived differences and sources of conflict. In particular, differences in personality type were more evident as a source of stress in same profession sub-teams than task, role and leadership ambiguity. It was also possible that the multidisciplinary team may have been viewed as more stressful in relation to how other interpersonal relationships were perceived. If others are viewed as more supportive and less stressful, then these are the colleagues who get the halo, so to speak (Thorndike, 1920). The multidisciplinary team is subsequently 'horned'.

Overall, it was concluded that the results in this study supported the hypothesis that professional colleagues are an important source of stress and support for HIV professionals and that perceptions about one relationship may affect perceptions about another. The limitations in the methodology of the study mean that it is not possible to conclude whether multidisciplinary teams are a main source of stress or something to blame. What can be said, however, is that

collegial relationships appear to be important in the **mediation** of stress and health outcome for the HIV teams in this study.

5.6.2 Organisational change and staff stress

The reduced self-efficacy scores for participants who had been in the HIV speciality for longer and lower personal accomplishment for this cohort compared with participants in Miller's study, was thought possibly to reflect decreased morale and satisfaction with work following changes in HIV services (Miller, 1995a). In particular, staff reported changes in resources, client contact and service provision following the introduction of combination anti-retroviral drug therapy treatments for HIV infected service users. These changes might have had a negative impact on job satisfaction and reward for some staff. It was also observed that HIV professionals who had been in the service for longer rated manager and multidisciplinary team sources of stress more highly. Service changes may have increased collegial sources of stress and contributed to reduced self-efficacy for longer servicing HIV professionals. Collegial sources of stress may also have contributed to reduced personal accomplishment for the cohort in this study.

5.6.3 Personality and stress in teams

Overall, this study showed support for the analysis and predictions using the Myers Briggs Type Indicator interpretation guide (Hirsh & Kummerow, 1990). There was also some evidence to support a shift in personality type of individuals under stress (Quenk, 1996). Consistent with the findings of previous research, the team with the highest stress levels was also the team with

most shifts in personality type in the predicted direction towards introverted, thinking and judging preferences (Cooley and Keesey, 1981; Ware, Rytting and Jenkins, 1994). Analysis of individuals' personality type from all the teams also offered support for similar personality type shifts for individuals with higher stress scores. Interpersonal sources of conflict in teams could also be predicted to some extent by differences in personality preferences of individuals in the team.

5.6.4 Intervention planning

With regards to organisational development approaches to managing stress in teams, then it would appear that different approaches for different teams might be useful. In particular, multidisciplinary teams in this study may benefit from team development which is based on task and role analysis, and promoting mutual understanding of each other's place in the team. Objectives would include identifying mutual aims and complementary ways of working together and reducing the temptation to focus on perceived 'differences' as a source of conflict, competition, and blame.

Discrepancies about task and role were not found to be so much of an issue for some profession teams compared with personality type differences as a source of conflict. This may be because some profession workers have greater clarity of roles and responsibilities, clearer hierarchy and leadership structure and better understanding of each other's professional aims (especially for nurse teams). This may tend to amplify aspects of the team which function less well such as differences in personality type, preferred ways of making decisions, planning and achieving closure on projects. The organisational intervention that might be

more appropriate for some profession teams in this study may be team building based on the MBTI. This method of team building would aim to focus on team strengths and weaknesses, areas of complementarity and conflict arising from shared and different personality characteristics. The team could consider how it can capitalise on its strengths, develop its weaknesses and have greater understanding about how team members fit together.

Manager support was found to be related to reduced perceived stress from same profession and multidisciplinary team colleagues. Managers were also found to rate the multidisciplinary team as more stressful than did non-managers. Being part of multidisciplinary and same profession team development intervention may assist managers in their role as well as improve their supportive ability. An additional organisational intervention, which may enhance management potential, would be management development. This would include assessing the manager for personality factors that may influence his/her management style; to include leadership style, key motivators, interpersonal style, problem-solving and decision-making styles. This information would be used to design a management development programme that would be unique, and confidential, to the manager for personal and professional development. It would also be possible to use the assessment to plan key development objectives and to evaluate progress for the manager and need to revise the plan (OPP, 1997).

5.6.5 Future directions

The findings in this study complement, but by no means replace, the existing literature on stress and burnout in HIV professionals. There is need for more research to study the stress mediating effects of interpersonal relationships.

Specifically a prospective, longitudinal study is needed with interview and observational data about team process. There is also need to investigate the impact that team stress and team functioning has on client care. The role of the client's family both as a source of stress and source of reward, has surfaced in this study and also warrants further exploration. Research initiatives for the future would also include developing and evaluating different stress management approaches for HIV professionals, teams and organisations (Miller, 1995d). This study offers some evidence to suggest that organisational intervention may be useful to reduce collegial sources of stress and promote supportive relationships at work and healthy team functioning. Organisational development options, such as team building, task and role analysis, and individual and management development planning may be useful to decrease or prevent stress in HIV services. Such strategies would aim to modify the context in which occupational stress is mediated, rather than the HIV worker. It seems likely that different HIV services will need unique programmes designed to address their specific organisational issues. Differences in cultural, political, medical and psychosocial imperatives for the HIV services also need to be taken into consideration. However, it is likely that some of the components of these programmes would be relevant across contexts.

The effectiveness of cognitive-behavioural interventions and staff support groups for managing stress in HIV professionals also need to be evaluated. It is not expected that these interventions will reduce organisational stress and burnout for HIV professionals, but rather they may help the individual **cope** with some of the interpersonal sources of stress described in this study. Cognitive-behavioural stress management strategies, relaxation training and support groups will still have their place, especially for already stressed individuals and

organisations. However, unless some of the organisational issues are understood and addressed first, the problem may persist and clinical treatment effects will be reduced.

Clinical interventions that focus on modifying the cognitions and behaviour of the health professionals, can be part of an organisational stress management programme. They should not, however, be used in isolation because this reinforces the view that the staff need assistance, rather than senior executives need to develop their management skills and organisational vision as well. A balanced approach is needed so that no one individual or group of professionals feel blamed or excluded. In the current study, it could not be discerned whether the multidisciplinary team was a major source of stress or had a major role to play as 'scapegoat' and 'third-leg of the triangle' for other professionals to unite against (Rolland, 1994). It seems likely that both were the case and to rush in and 'point the finger' at the multidisciplinary team would be more of the same. A reframe for an organisation might include understanding the importance of the multidisciplinary team in holding other sub-teams together. Another example would be understanding the role of the multidisciplinary team in distracting professionals from focusing on other sources of stress which might be more difficult for them to cope with or resolve.

The biological, psychological and social nature of HIV demands an integrated and multidisciplinary approach to caring for clients affected by illness; to include the client and his family as well (Schwartz, 1982; Rolland, 1994). Professional relationships with colleagues, clients and clients' families, have all been shown in this study to be possible sources of occupational stress in HIV care that may influence health outcome for staff. What has not been

investigated in this study, however, is what effect interpersonal relationship issues and team functioning have on client care. Although there is an abundance of research investigating the client-practitioner relationship, there is little on the client-healthcare team relationship and impact that this has on client care (Taylor, 1995). It can only be imagined how some of the dynamics described in this study may have compromised client care. It would seem timely, given the effects that organisational change in HIV services may have had on staff, to investigate how this in turn may affect client care. Increasing understanding of the organisational and team context of stress in HIV care may promote healthy HIV team functioning and optimise client care. Collegial relationships, power issues, team functioning, team development and communication are important areas in the future for organisational stress management, stress research and stress prevention in HIV care services (Roth, 1995). This would involve extending the stress and burnout research to the study of HIV team dynamics and the development of additional measures of stress and burnout and interpersonal relationships. Promoting healthy team and organisational functioning in HIV care services, should be a priority for promoting healthy staff and quality client care into the next millennium.

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Appendix 1

Occupational questionnaire

OCCUPATIONAL QUESTIONNAIRE

Instructions

The following booklet obtains information about how people cope with difficult situations at work

IT IS ANONYMOUS AND ENTIRELY CONFIDENTIAL

Personal details will not be given to anyone including your manager, occupational health department or colleagues.

THE BOOKLET PROVIDES INFORMATION FOR:

- 1) Assessment of work stressors
- 2) Designing work place interventions
- 3) Research and evaluation

IN NO WAY ARE YOU OBLIGED TAKE PART IF YOU DO NOT WANT TO.

Your help in giving your view and experiences would be very much appreciated. The information will be used for assessment and designing the Team Day and it could be used for research and evaluation. The information will be for the facilitator's use only.

If you agree to become involved, please work through the questionnaire in order and answer all sections. Thank you.

FOR FURTHER INFORMATION, CONTACT

Heather Salt
Consultant Psychologist
Northwick Park Hospital
Watford Road
Harrow
Middx. HA1 3UJ
Tel : 0181869 2326

Please give your completed form to the facilitator

Appendix 1 (GHQ-12 questionnaire)

SECTION 2

INSTRUCTIONS:

SECTION 2 COMPRISES FOUR BRIEF QUESTIONNAIRES³. YOU WILL NEED TO READ THE INSTRUCTION FOR EACH QUESTIONNAIRE AS THEY ARE ALL DIFFERENT. PLEASE COMPLETE ALL QUESTIONNAIRES

GENERAL HEALTH QUESTIONNAIRE (GHQ-12)



Name:	Date:
-------------	-------------

Please read this carefully.

We should like to know if you have had any medical complaints and how your health has been in general, over the last few weeks. Please answer ALL the questions simply by underlining the answer which you think most nearly applies to you. Remember that we want to know about present and recent complaints, not those that you had in the past.

It is important that you try to answer ALL the questions.

Thank you very much for your co-operation.

Have you recently . . .

1. been able to concentrate on whatever you're doing?	Better than usual	Same as usual	Less than usual	Much less than usual
2. lost much sleep over worry?	Not at all	No more than usual	Rather more than usual	Much more than usual
3. felt that you are playing a useful part in things?	More so than usual	Same as usual	Less useful than usual	Much less useful
4. felt capable of making decisions about things?	More so than usual	Same as usual	Less so than usual	Much less than usual
5. felt constantly under strain?	Not at all	No more than usual	Rather more than usual	Much more than usual
6. felt you couldn't overcome your difficulties?	Not at all	No more than usual	Rather more than usual	Much more than usual
7. been able to enjoy your normal day-to-day activities?	More so than usual	Same as usual	Less so than usual	Much less than usual
8. been able to face up to your problems?	More so than usual	Same as usual	Less so than usual	Much less able
9. been feeling unhappy and depressed?	Not at all	No more than usual	Rather more than usual	Much more than usual
10. been losing confidence in yourself?	Not at all	No more than usual	Rather more than usual	Much more than usual
11. been thinking of yourself as a worthless person?	Not at all	No more than usual	Rather more than usual	Much more than usual
12. been feeling reasonably happy, all things considered?	More so than usual	About same as usual	Less so than usual	Much less than usual

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³ This section comprised the GHQ-12, MBI, GSE and PSS which have been included here for inspection

Human Services Survey

The purpose of this survey is to discover how various persons in the human services or helping professions view their jobs and the people with whom they work closely. Because persons in a wide variety of occupations will answer this survey, it uses the term *recipients* to refer to the people for whom you provide your service, care, treatment, or instruction. When answering this survey please think of these people as recipients of the service you provide, even though you may use another term in your work.

On the following page there are 22 statements of job-related feelings. Please read each statement carefully and decide if you ever feel this way *about your job*. If you have *never* had this feeling, write a "0" (zero) before the statement. If you have had this feeling, indicate *how often* you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way. An example is shown below.

Example:

HOW OFTEN:	0	1	2	3	4	5	6
	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

HOW OFTEN

0 - 6

Statement:

_____ I feel depressed at work.

If you *never* feel depressed at work, you would write the number "0" (zero) under the heading "HOW OFTEN." If you *rarely* feel depressed at work (a few times a year or less), you would write the number "1." If your feelings of depression are fairly frequent (a few times a week, but not daily) you would write a "5."



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Human Services Survey

HOW OFTEN:	0	1	2	3	4	5	6
	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

HOW OFTEN

0 - 6

Statements:

1. _____ I feel emotionally drained from my work.
2. _____ I feel used up at the end of the workday.
3. _____ I feel fatigued when I get up in the morning and have to face another day on the job.
4. _____ I can easily understand how my recipients feel about things.
5. _____ I feel I treat some recipients as if they were impersonal objects.
6. _____ Working with people all day is really a strain for me.
7. _____ I deal very effectively with the problems of my recipients.
8. _____ I feel burned out from my work.
9. _____ I feel I'm positively influencing other people's lives through my work.
10. _____ I've become more callous toward people since I took this job.
11. _____ I worry that this job is hardening me emotionally.
12. _____ I feel very energetic.
13. _____ I feel frustrated by my job.
14. _____ I feel I'm working too hard on my job.
15. _____ I don't really care what happens to some recipients.
16. _____ Working with people directly puts too much stress on me.
17. _____ I can easily create a relaxed atmosphere with my recipients.
18. _____ I feel exhilarated after working closely with my recipients.
19. _____ I have accomplished many worthwhile things in this job.
20. _____ I feel like I'm at the end of my rope.
21. _____ In my work, I deal with emotional problems very calmly.
22. _____ I feel recipients blame me for some of their problems.

(Administrative use only)

cat.

cat.

cat.

EE: _____ DP: _____ PA: _____

Appendix 1 (MBI questionnaire)

SECTION 2 (CONT)



Appendix 1 (GSE questionnaire)

SECTION 2 (CONT)

GENERALIZED SELF-EFFICACY SCALE



Name:

Date: Record Number:

	Not at all true	Barely true	Moderately true	Exactly true
1. I can always manage to solve difficult problems if I try hard enough.	1	2	3	4
2. If someone opposes me, I can find means and ways to get what I want.	1	2	3	4
3. It is easy for me to stick to my aims and accomplish my goals.	1	2	3	4
4. I am confident that I could deal efficiently with unexpected events.	1	2	3	4
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.	1	2	3	4
6. I can solve most problems if I invest the necessary effort.	1	2	3	4
7. I can remain calm when facing difficulties because I can rely on my coping abilities.	1	2	3	4
8. When I am confronted with a problem, I can usually find several solutions.	1	2	3	4
9. If I am in a bind, I can usually think of something to do.	1	2	3	4
10. No matter what comes my way, I'm usually able to handle it.	1	2	3	4

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Appendix 1 (PSS questionnaire)

SECTION 2 (CONT)

PERCEIVED STRESS SCALE



Name:

Date: Record Number:

Instructions

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer each question fairly quickly. That is, don't try to count up the number of times you felt a particular way, but rather indicate the alternative that seems like a reasonable estimate.

For each question choose from the following alternatives:

- 0 = never
- 1 = almost never
- 2 = sometimes
- 3 = fairly often
- 4 = very often

1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you felt that you were unable to control the important things in your life?
3. In the last month, how often have you felt nervous and stressed?
4. In the last month, how often have you dealt with irritating life hassles?
5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?
6. In the last month, how often have you felt confident about your ability to handle your personal problems?
7. In the last month, how often have you felt that things were going your way?
8. In the last month, how often have you found that you could not cope with all the things you had to do?
9. In the last month, how often have you been able to control irritations in your life?
10. In the last month, how often have you felt that you were on top of things?
11. In the last month, how often have you been angered because of things that happened that were outside of your control?
12. In the last month, how often have you found yourself thinking about things that you have to accomplish?
13. In the last month, how often have you been able to control the way you spend your time?
14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

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Appendix 1
SECTION 3

THINK ABOUT YOUR LAST MONTH AT WORK (IF YOU HAVE BEEN ON LEAVE, THINK OF THE LAST MONTH YOU ACTUALLY WORKED).

THINK OF THE MOST DIFFICULT OR STRESSFUL WORK SITUATION YOU HAVE ENCOUNTERED DURING THIS TIME.

PLEASE ANSWER THE FOLLOWING QUESTIONS

1. WHAT WAS THE WORK EVENT WHICH WAS MOST DIFFICULT OR STRESSFUL? PLEASE DESCRIBE BRIEFLY

.....

.....

.....

2. WHY WAS IT DIFFICULT OR STRESSFUL? PLEASE DESCRIBE

.....

.....

.....

3. DO YOU THINK THE PROBLEM YES
COULD BE OVERCOME, CHANGED NO
OR SOLVED IN SOME WAY? DON'T KNOW

4. IF YES, WHAT COULD BE DONE? PLEASE DESCRIBE.

.....

.....

5. IF NO, WHY COULDN'T ANYTHING BE DONE?

.....

.....

PLEASE TURN OVER

Appendix 1 (COPE questionnaire)

SECTION 4

PLEASE GO THROUGH THE FOLLOWING STATEMENTS AND INDICATE TO WHAT EXTENT YOU DID EACH ONE FOR THE SITUATION YOU DESCRIBED. CHOOSE THE NUMBER WHICH BEST REPRESENTS HOW MUCH YOU DID EACH ONE USING THE RESPONSE CHOICES BELOW

- 1= I DIDN'T DO THIS AT ALL
- 2=I DID THIS A LITTLE BIT
- 3=I DID THIS A MEDIUM AMOUNT
- 4=I DID THIS A LOT

COPE



Name:

Date: Record Number:

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

Then respond to each of the following items by choosing one number for each, using the response choices listed just below

- | | |
|--|-------------------------------------|
| 1 = I usually don't do this at all. | 2 = I usually do this a little bit. |
| 3 = I usually do this a medium amount. | 4 = I usually do this a lot. |

Please try to respond to each item separately in your mind from each other item. Choose your answers thoughtfully, and make your answers as true FOR YOU as you can. Please answer every item. There are no 'right' or 'wrong' answers, so choose the most accurate answer for YOU – not what you think 'most people' would say or do. Indicate what YOU usually do when YOU experience a stressful event.

- | | |
|--|--------------------------|
| 1. I try to grow as a person as a result of the experience. | <input type="checkbox"/> |
| 2. I turn to work or other substitute activities to take my mind off things. | <input type="checkbox"/> |
| 3. I get upset and let my emotions out. | <input type="checkbox"/> |
| 4. I try to get advice from someone about what to do. | <input type="checkbox"/> |
| 5. I concentrate my efforts on doing something about it. | <input type="checkbox"/> |
| 6. I say to myself "this isn't real". | <input type="checkbox"/> |
| 7. I put my trust in God. | <input type="checkbox"/> |
| 8. I laugh about the situation. | <input type="checkbox"/> |
| 9. I admit to myself that I can't deal with it, and give up trying. | <input type="checkbox"/> |
| 10. I restrain myself from doing anything too quickly. | <input type="checkbox"/> |
| | |
| 11. I discuss my feelings with someone. | <input type="checkbox"/> |
| 12. I use alcohol or drugs to make myself feel better. | <input type="checkbox"/> |
| 13. I get used to the idea that it happened. | <input type="checkbox"/> |
| 14. I talk to someone to find out more about the situation. | <input type="checkbox"/> |
| 15. I keep myself from getting distracted by other thoughts or activities. | <input type="checkbox"/> |
| 16. I daydream about things other than this. | <input type="checkbox"/> |
| 17. I get upset, and am really aware of it. | <input type="checkbox"/> |
| 18. I seek God's help. | <input type="checkbox"/> |
| 19. I make a plan of action. | <input type="checkbox"/> |
| 20. I make jokes about it. | <input type="checkbox"/> |

Appendix 1 (COPE questionnaire)

SECTION 4 (CONT)

2

- | | |
|---|--------------------------|
| 21. I accept that this has happened and that it can't be changed. | <input type="checkbox"/> |
| 22. I hold off doing anything about it until the situation permits. | <input type="checkbox"/> |
| 23. I try to get emotional support from friends and relatives. | <input type="checkbox"/> |
| 24. I just give up trying to reach my goal. | <input type="checkbox"/> |
| 25. I take additional action to try to get rid of the problem. | <input type="checkbox"/> |
| 26. I try to lose myself for a while by drinking alcohol or taking drugs. | <input type="checkbox"/> |
| 27. I refuse to believe that it has happened. | <input type="checkbox"/> |
| 28. I let my feelings out. | <input type="checkbox"/> |
| 29. I try to see it in a different light, to make it seem more positive. | <input type="checkbox"/> |
| 30. I talk to someone who could do something concrete about the problem. | <input type="checkbox"/> |
| | |
| 31. I sleep more than usual. | <input type="checkbox"/> |
| 32. I try to come up with a strategy about what to do. | <input type="checkbox"/> |
| 33. I focus on dealing with this problem and, if necessary, let other things slide a little. | <input type="checkbox"/> |
| 34. I get sympathy and understanding from someone. | <input type="checkbox"/> |
| 35. I drink alcohol or take drugs, in order to think about it less. | <input type="checkbox"/> |
| 36. I kid around about it. | <input type="checkbox"/> |
| 37. I give up the attempt to get what I want. | <input type="checkbox"/> |
| 38. I look for something good in what is happening. | <input type="checkbox"/> |
| 39. I think about how I might best handle the problem. | <input type="checkbox"/> |
| 40. I pretend that it hasn't really happened. | <input type="checkbox"/> |
| | |
| 41. I make sure not to make matters worse by acting too soon. | <input type="checkbox"/> |
| 42. I try hard to prevent other things from interfering with my efforts at dealing with this. | <input type="checkbox"/> |
| 43. I go to the cinema or watch television, to think about it less. | <input type="checkbox"/> |
| 44. I accept the reality of the fact that it happened. | <input type="checkbox"/> |
| 45. I ask people who have had similar experiences what they did. | <input type="checkbox"/> |
| 46. I feel a lot of emotional distress and I find myself expressing those feelings a lot. | <input type="checkbox"/> |
| 47. I take direct action to get around the problem. | <input type="checkbox"/> |
| 48. I try to find comfort in my religion. | <input type="checkbox"/> |
| 49. I force myself to wait for the right time to do something. | <input type="checkbox"/> |
| 50. I make fun of the situation. | <input type="checkbox"/> |
| | |
| 51. I reduce the amount of effort I'm putting into solving the problem. | <input type="checkbox"/> |
| 52. I talk to someone about how I feel. | <input type="checkbox"/> |
| 53. I use alcohol or drugs to help me get through it. | <input type="checkbox"/> |
| 54. I learn to live with it. | <input type="checkbox"/> |
| 55. I put aside other activities in order to concentrate on this. | <input type="checkbox"/> |
| 56. I think hard about what steps to take. | <input type="checkbox"/> |
| 57. I act as though it hasn't even happened. | <input type="checkbox"/> |
| 58. I do what has to be done, one step at a time. | <input type="checkbox"/> |
| 59. I learn something from the experience. | <input type="checkbox"/> |
| 60. I pray more than usual. | <input type="checkbox"/> |

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Appendix 1 (Sources of stress questionnaire)

SECTION 5

1. HOW MUCH OF YOUR DAILY HASSLES AND STRESS COMES FROM RELATIONSHIPS WITH THE FOLLOWING PEOPLE. FOR EACH RELATIONSHIP, PLEASE CIRCLE THE NUMBER FROM 1-7 TO SHOW HOW STRESSFUL YOU THINK EACH RELATIONSHIP IS.

SOURCE OF STRESS	None	Some	Very
1) CLIENTS	1	2 3 4	5 6 7
2) CLIENTS' FAMILIES	1	2 3 4	5 6 7
3) THE MULTIDISCIPLINARY TEAM (excluding management)	1	2 3 4	5 6 7
4) MANAGER/SUPERVISOR	1	2 3 4	5 6 7
5) SAME PROFESSION COLLEAGUES (excluding management)	1	2 3 4	5 6 7
6) PARTNER (IF APPLICABLE)	1	2 3 4	5 6 7
7) OWN FAMILY AND FRIENDS	1	2 3 4	5 6 7

2. HOW MUCH SUPPORT COMES FROM RELATIONSHIPS WITH THE FOLLOWING PEOPLE (NEXT PAGE). FOR EACH RELATIONSHIP, PLEASE CIRCLE THE NUMBER FROM 1-7 TO SHOW HOW MUCH SUPPORT YOU RECEIVE FROM YOUR RELATIONSHIP WITH EACH PERSON/S.

THE SECOND PART OF EACH QUESTION ASKS YOU TO RATE HOW MUCH SUPPORT YOU WOULD LIKE IDEALLY FORM THESE PEOPLE. AS, BEFORE, PLEASE PUT A CIRCLE AROUND ONE NUMBER BETWEEN 1 AND 7 TO SHOW WHAT THE RATING IS.

PLEASE TURN OVER

Appendix 1 (SOS questionnaire)

SOS FORM

Name:

Date: Record Number:

Instructions

For each person listed below please circle a number from 1 to 7 to show how well these people provide the type of help that is listed.

The second part of each question asks you to rate how you would like things to be if they were exactly as you hoped for. As before, please put a circle around one number between 1 and 7 to show what the rating is.

Person 1 - Manager/Supervisor	<i>Never</i>	<i>Sometimes</i>	<i>Always</i>				
1. a) Can you trust, talk to frankly and share your feelings with this person?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
2. a) Can you lean on and turn to this person in times of difficulty?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
3. a) Does he/she give you practical help?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
4. a) Can you spend time with him/her socially?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7

Person 2 - Nursing Team Colleagues (not manager)							
1. a) Can you trust, talk to frankly and share your feelings with these persons?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
2. a) Can you lean on and turn to these persons in times of difficulty?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
3. a) Do they give you practical help?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
4. a) Can you spend time with them socially?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7

PLEASE CIRCLE ONE NUMBER ONLY FOR EACH QUESTION

Appendix 1 (SOS questionnaire)

Person 3 - Multidisciplinary Team Colleagues (non-nursing)		<i>Never</i>	<i>Sometimes</i>	<i>Always</i>				
1	a) Can you trust, talk to frankly and share your feelings with these persons?	1	2	3	4	5	6	7
	b) What rating would your ideal be?	1	2	3	4	5	6	7
2	a) Can you lean on and turn to these persons in times of difficulty?	1	2	3	4	5	6	7
	b) What rating would your ideal be?	1	2	3	4	5	6	7
3	a) Do they give you practical help?	1	2	3	4	5	6	7
	b) What rating would your ideal be?	1	2	3	4	5	6	7
4	a) Can you spend time with them socially?	1	2	3	4	5	6	7
	b) What rating would your ideal be?	1	2	3	4	5	6	7

Person 4 - Closest Work Colleague		<i>Never</i>	<i>Sometimes</i>	<i>Always</i>				
1	a) Can you trust, talk to frankly and share your feelings with these persons?	1	2	3	4	5	6	7
	b) What rating would your ideal be?	1	2	3	4	5	6	7
2	a) Can you lean on and turn to these persons in times of difficulty?	1	2	3	4	5	6	7
	b) What rating would your ideal be?	1	2	3	4	5	6	7
3	a) Do they give you practical help?	1	2	3	4	5	6	7
	b) What rating would your ideal be?	1	2	3	4	5	6	7
4	a) Can you spend time with them socially?	1	2	3	4	5	6	7
	b) What rating would your ideal be?	1	2	3	4	5	6	7

Person 5 - Partner (if applicable)		<i>Never</i>	<i>Sometimes</i>	<i>Always</i>				
1	a) Can you trust, talk to frankly and share your feelings with this person?	1	2	3	4	5	6	7
	b) What rating would your ideal be?	1	2	3	4	5	6	7
2	a) Can you lean on and turn to this person in times of difficulty?	1	2	3	4	5	6	7
	b) What rating would your ideal be?	1	2	3	4	5	6	7
3	a) Does he/she give you practical help?	1	2	3	4	5	6	7
	b) What rating would your ideal be?	1	2	3	4	5	6	7
4	a) Can you spend time with him/her socially?	1	2	3	4	5	6	7
	b) What rating would your ideal be?	1	2	3	4	5	6	7

PLEASE CIRCLE ONE NUMBER ONLY FOR EACH QUESTION

Appendix 1 (SOS questionnaire)

Person 6 - Best Friend	<i>Never</i>	<i>Sometimes</i>	<i>Always</i>				
1 a) Can you trust, talk to frankly and share your feelings with this person?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
2 a) Can you lean on and turn to this person in times of difficulty?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
3 a) Does he/she give you practical help?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
4 a) Can you spend time with him/her socially?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7

Person 7 - Closest Family Member (not partner)	<i>Never</i>	<i>Sometimes</i>	<i>Always</i>				
1 a) Can you trust, talk to frankly and share your feelings with this person?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
2 a) Can you lean on and turn to this person in times of difficulty?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
3 a) Does he/she give you practical help?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
4 a) Can you spend time with him/her socially?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7

PLEASE CIRCLE ONE NUMBER ONLY FOR EACH QUESTION

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Appendix 2

Examples of participant responses detailing the most stressful event at work in the previous month

Non-managers:

"Continuous interruption by a variety of workmen, colleagues, volunteers"

"clash of opinions & personalities in the staff team"

"meeting with manager: trying not to undermine, be supportive but assertive"

"clash with fellow colleagues"

"difference of view about the clinical care of a patient with a multidisciplinary team colleague"

"feeling isolated at work"

"patient was dying and we couldn't get him home in time with his partner: I felt we failed him and his partner"

"patients competing for attention when other patient was dying"

"confronting my manager to get my view across"

Managers:

"angry service users and team wanting me to sort things out"

"two members of staff not talking to each other"

"fear of not being good enough (at management)"

"trying to work with social services"

"I felt the Trust was playing games with me and changing budgets"

"Aggressive patients"

"Being told by my colleagues that all the problems with staff and on the ward was my fault"

"client was sectioned; there was no senior support or consultant support"

"dealing with junior staff problems"

"job threat and feeling insecure about my future in the unit"

"doctors not listening to our (the nurses) advice about patient's deteriorating condition. Relatives and patient were distressed"

Appendix 3

Myers Briggs Type Indicator: 16 personality types

from I. Myers (1993) Introduction to Type, Oxford Psychologists Press, p.7

		Sensing Types	Intuitive Types	
Introverts	ISTJ	ISFJ	INFJ	INTJ
	Serious, quiet, earn success by concentration and thoroughness. Practical, orderly, matter-of-fact, logical, realistic and dependable. See to it that everything is well organised. Take responsibility. Make up their own minds about what should be accomplished and work towards it steadily regardless of protests or distractions.	Quiet, friendly, responsible and conscientious. Work devotedly to meet their obligations. Lend stability to any project or group. Thorough, painstaking, accurate. Their interests are usually not technical. Can be patient with necessary details. Loyal, considerate, perceptive, concerned with how other people feel.	Succeed by perseverance, originality and desire to do whatever is needed or wanted. Put their best efforts into their work. Quietly forceful, conscientious, concerned for others. Respected for their firm principles. Likely to be honoured and followed for their clear visions as to how best to serve the common good.	Have original minds and great drive for their own ideas and purposes. Have long-range vision and quickly find meaningful patterns in external events. In fields that appeal to them, they have a fine power to organise a job and carry it through. Sceptical, critical, independent, determined, have high standards of competence and performance.
Extraverts	ISTP	ISFP	INFP	INTP
	Cool onlookers—quiet, reserved, observing and analysing life with detached curiosity and unexpected flashes of original humour. Usually interested in cause and effect, how and why mechanical things work and in organising facts using logical principles. Excel at getting to the core of a practical problem and finding the solution.	Retiring, quietly friendly, sensitive, kind, modest about their abilities. Shun disagreements, do not force their opinions or values on others. Usually do not care to lead but are often loyal followers. Often relaxed about getting things done because they enjoy the present moment and do not want to spoil it by undue haste or exertion.	Quiet observers, idealistic, loyal. Important that outer life be congruent with inner values. Curious, quick to see possibilities, often serve as catalysts to implement ideas. Adaptable, flexible and accepting unless a value is threatened. Want to understand people and ways of fulfilling human potential. Little concern for possessions or surroundings.	Quiet and reserved. Especially enjoy theoretical or scientific pursuits. Like solving problems with logic and analysis. Interested mainly in ideas, with little liking for parties or small talk. Tend to have sharply defined interests. Need careers where some strong interest can be used and useful.
	ESTP	ESFP	ENFP	ENTP
	Good at on-the-spot problem solving. Like action, enjoy whatever comes along. Tend to like mechanical things and sports, with friends on the side. Adaptable, tolerant, pragmatic, focused on getting results. Dislike long explanations. Are best with real things that can be worked, handled, taken apart, or put together.	Outgoing, accepting, friendly, enjoy everything and make things more fun for others by their enjoyment. Like action and making things happen. Know what's going on and join in eagerly. Find remembering facts easier than mastering theories. Are best in situations that need sound common sense and practical ability with people.	Warmly enthusiastic, high-spirited, ingenious and imaginative. Able to do almost anything that interests them. Quick with a solution for any difficulty and ready to help anyone with a problem. Often rely on their ability to improvise instead of preparing in advance. Can usually find compelling reasons for whatever they want.	Quick, ingenious, good at many things. Stimulating company, alert, outspoken. May argue for fun on either side of a question. Resourceful in solving new and challenging problems, but may neglect routine assignments. Apt to turn to one new interest after another. Skillful in finding logical reasons for what they want.
ESTJ	ESFJ	ENFJ	ENTJ	
Practical, realistic, matter-of-fact, with a natural head for business or mechanics. Not interested in abstract theories; want learning to have direct and immediate application. Like to organise and run activities. Often make good administrators, are decisive, quickly move to implement decisions, take care of routine details.	Warm-hearted, talkative, popular, conscientious, born co-operators, active committee members. Need harmony and may be good at creating it. Always doing something nice for someone. Work best with encouragement and praise. Main interest is in things that directly and visibly affect people's lives.	Responsive and responsible. Feel real concern for what others think or want, and try to handle things with due regard for others' feelings. Can present a proposal or lead a group discussion with ease and tact. Sociable, popular, sympathetic. Responsive to praise and criticism. Like to help others and enable people to achieve their potential.	Frank, decisive, leaders in activities. Develop and implement comprehensive systems designed to solve organisational problems. Good in anything that requires reasoning and intelligent talk, such as public speaking. Are usually well-informed and enjoy adding to their fund of knowledge.	

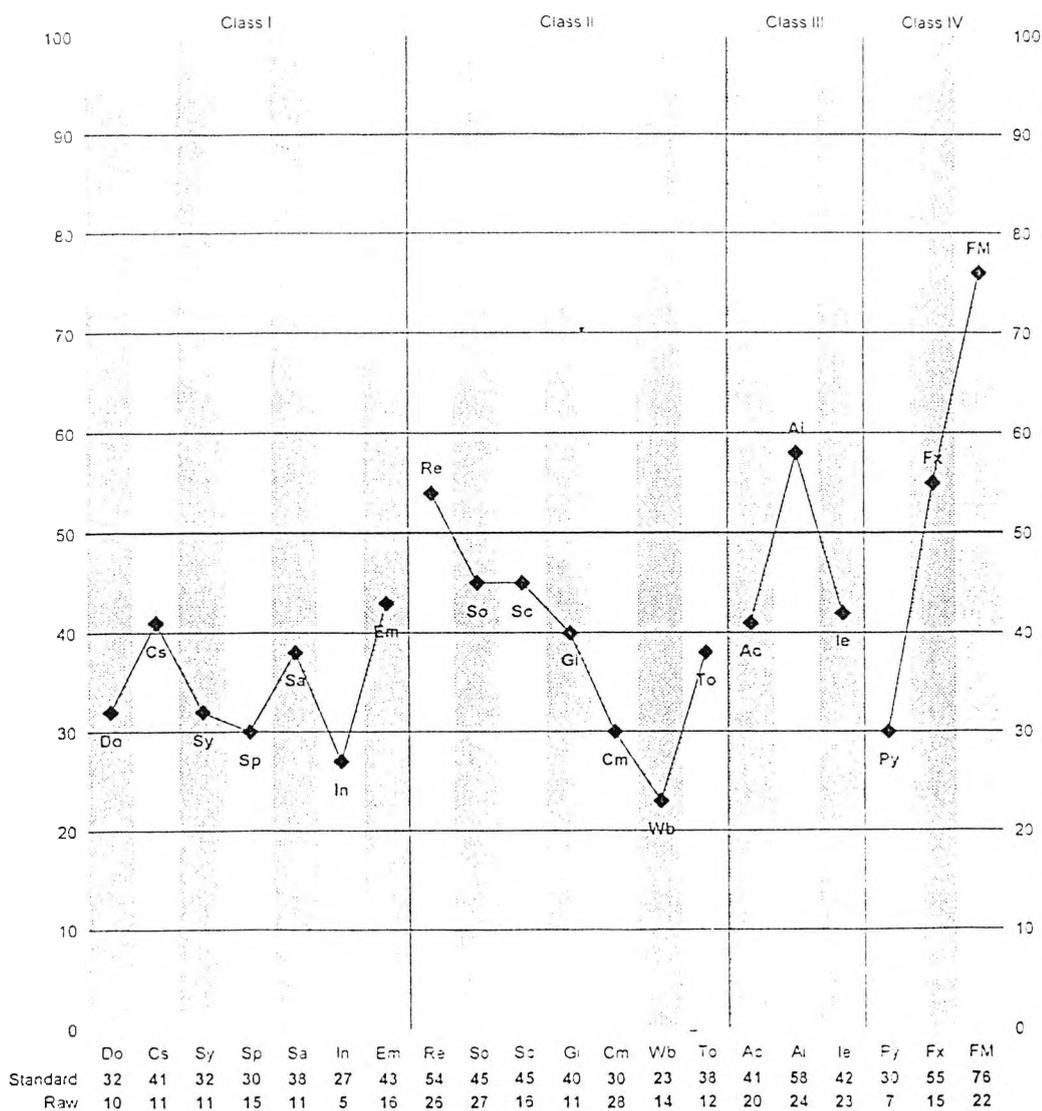
Appendix 4

CPI profile, raw scores and standardised scores for Brian using male population norms

PAGE 3
CPI PROFILE REPORT
4/27/98

DELTA 3 MALE

PART III PROFILE BASED ON NORMS FOR MALES



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Appendix 5

Table 6. CPI class scores, raw scores and standardised scores for Brian compared to the mean raw scores for a group of male nurses (n = 52).

CPI Scale	Class	Raw score for Brian	Mean raw scores for normative sample	Standard deviation for normative sample	Standardised score for Brian
Dominance	I	10	21.49	6.27	32
Capacity for status	I	11	18.36	3.34	41
Sociability	I	11	21.17	4.45	32
Social Presence	I	15	26.21	4.48	30
Self acceptance	I	11	18.26	3.97	38
Independence	I	5	17.74	4.21	27
Empathy	I	16	22.01	4.29	43
Responsibility	II	26	26.46	4.55	54
Socialisation	II	27	31.36	5.57	45
Self-control	II	16	19.64	6.21	45
Good impression	II	11	16.54	5.93	40
Communality	II	28	34.86	3.21	30
Well being	II	14	30.47	5.54	23
Tolerance	II	12	23.11	4.3	38
Achievement via conformance	III	20	27.32	4.91	41
Achievement via independence	III	24	25.35	4.39	58
Intellectual efficiency	III	23	31.87	4.5	42
Psychological mindedness	IV	7	16.97	3.75	30
Flexibility	IV	15	15.65	4.15	55
Sensitivity	IV	22	14.47	3.53	76

Appendix 6

DEVELOPMENT REPORT FOR BRIAN

INTRODUCTION

This following report is based on the personality assessment and a personal interview with Brian. It also includes information obtained from the occupational questionnaire. It aims at drawing out Brian's key strengths and areas for development under the following headings.

- * Key motivators
- * Leadership style
- * Interpersonal skills
- * Problem solving style
- * Decision making style

In the conclusion section, areas for development are outlined which Brian may wish to discuss with his manager as part of a professional development programme for himself. The report remains confidential to Brian and is only valid for individual development purposes for 2 years.

Key Motivators

Brian is relaxed and calm in his approach to routine tasks and may appear "laid back" and sometimes distant by his colleagues. His manner should not be confused with being nonchalant or lacking motivation. Brian is someone who

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likes to do something in his own way in his own time. He can be loyal and dedicated and likes to show this in practical ways. Brian is likely to be motivated by an environment, which allows him some flexibility, rather than rules and structure. He likes to be in command of the facts and details and translates these into tangible "hands-on" work. Conceptual thinking and theory will not motivate him; rather he will prefer to have things presented in a down to earth way. Brian is happy to work on his own.

Leadership style

Brian is not a natural born leader. He does not seek the driving seat, but prefers to contribute from the back. He is likely to lead in a democratic way, eliciting others views and making suggestions himself. Brian will want to include other team members, which is important to get people on board, but he may do this at the risk of not reaching a decision or implementing a procedure. He may also do this as a way of avoiding making a decision, which might be contested, or being criticised himself. Brian can be very sensitive to the way others view him. Subordinates and seniors are likely to find him fair, but may become frustrated if they seek a more directive approach.

Brian is a private person and he likes to think and reflect, taking his time to do things. He enjoys spontaneity and flexibility in the way he manages and he will appreciate this quality in others. Brian is not one for a structured work environment or rigid rules and procedures. Others may find his adaptable approach too flexible and spontaneous for them, especially for people who prefer a more structured approach or closure on decisions.

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He fares better in an environment which allows him to express his individuality and independence although he can lack confidence, especially if he feels under pressure or that he is being judged or criticised. Under these circumstances he is likely to withdraw more inside. He will become negative in his view of himself and others and be prone to worry. This may show itself with somatic complaints and physical illness.

In summary, Brian does not wish to dominate others or lead from the front. He prefers to support others rather than organise them. He would make a good manager in a democratic team or an equally good "second in command". He will have greater difficulty in teams, which require him to take centre stage, be autocratic or make hard and fast decisions.

Interpersonal skills

Others will see Brian as private and quiet, especially those who do not know him very well. He is likely to prefer a one-to-one conversation with someone rather than be part of a group. He does not seek the limelight, nor is he inclined to push himself forward. He is quite happy to work on his own.

Brian is sensitive to how others view him and he will not want to upset others or be in conflict. Brian will become despondent and withdraw if he feels he is not making the grade or meeting their expectations. Under pressure, Brian may become self-critical and uncharacteristically negative and abrupt with others. He may then be viewed as being self-absorbed and distant when really he is hurt and unhappy.

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Problem solving style

Brian likes to assess the situation before leaping to conclusions. He likes to be well informed with the details and will take a logical and systematic approach to problem solving. Brian may find it difficult to be objective at times or to see the bigger picture. He is not comfortable with abstract problem solving tasks and far prefers to operate in the "real world" finding practical solutions to practical problems. Brian may find it difficult to envisage the future possibilities or long-term objectives at times because of his natural preference for the here and now.

Brian will prefer to think through problems rather than talk through them and may appear "non-responsive" at times even though there is a lot going on inside his head. He may need to communicate this to others if he wants them to understand his beliefs, intentions or rationale for a particular action.

Decision making style

Brian will make decisions according to his own beliefs and values. He is likely to want to take his time when asked to decide about something. He likes to collect all the facts and details first and to reflect on them. He may find it difficult to make objective decisions and will tend to follow his heart rather than listen to his head. That is not to say that Brian can not act quickly and efficiently when he needs to, on the contrary, Brian is likely to be very adept in dealing with practical matters.

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Brian may lack confidence in his decision-making and avoid doing so in order to side step conflict. This may lead to other difficulties, especially if others are looking to him for direction and authority.

Report summary

Brian is a private person and tends to think things through and do things in his own time. He is very practical in his orientation and likes to know the facts and details before making decisions and problem-solving. Brian uses his underlying values and principles to make decisions, but needs to be careful not to lose sight of the bigger picture. He is likely to be task focused, but in a fairly flexible and adaptable way. He can be logical and systematic in his analysis of problems but others may not see this because of his preference for doing things in a more spontaneous and sometimes idiosyncratic way. Brian will feel less comfortable with people who like the predictable and ordered, and they in turn may be frustrated without the structure and direction they require.

Brian is extremely modest and does not seek or indeed like the limelight. He is quite happy to follow rather than lead and will do so loyally. If required to take a lead role, he will lead by consensus rather than from a prominent position. Brian is able to question rules and procedures rather than accept them just because they are there. However, he will want to avoid conflict and may spend

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time worrying. He is likely to take criticism to heart and can be extremely sensitive, especially under stress. Brian may prefer working on own rather than in groups and teams. He likes a fair degree of flexibility and spontaneity and working independently. Brian is calm and relaxed in his manner because he likes to enjoy the moment rather than rush.

Recently, however, the moment is presenting problems for Brian. He appears to be inwardly upset and down about his position at work which is eroding his self-confidence and contentment still further. He needs to develop his understanding of his situation and develop his coping mechanisms. He may find it helpful to consider his development needs in this light.

Under pressure, Brian will feel more emotionally exhausted and lack a sense of personal accomplishment if he can not find solutions. He will be keen to avoid conflict even if it means becoming stressed himself. He is likely to withdraw and feel a sense of hopelessness and lack of support. This will affect his usual appetite for work and play and he needs to take care not to let his sensitivity become negative and self-destructive.

Areas for development

Brian needs to address his current work dilemma and the impact that this has had on his mood, health and approach to work. He may require individual support to assist him to tease out what are inherently his personal issues and what belongs to the organisation. Inevitably the two will be integrally bound to one another.

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Brian may find it helpful to examine his managing style and consider how if at all he would like to change it to fit in with the organisational demands and culture. He may have personal objectives and wish to take up formal management training initiatives. On the other hand he may prefer to adapt his management role to better suit his personality and professional goals.

Confidence is an issue for Brian, especially at the moment. He may find it helpful to look at ways in which he can build up his confidence in order to feel more in control and happy with his working relationships with team members. He does not appear to be having difficulties in his clinical work but rather with team dynamics, especially around conflict and difference, or feeling deskilled and under-valued. No doubt team-building initiatives will help, but may not be the whole answer for Brian.

Brian may need to develop his comfort zones with regards to being assertive, coping with conflict and taking more of a lead role when required in his current role. Alternatively, as above, he may need to modify his job description to fit better with his personal qualities and interest. Brian has much to offer the team and his clients and his sensitivity will both place him in a privileged position, as well as a vulnerable one.