STRESS
AMONG INDIAN GENERAL PRACTITIONERS
IN THE
GREATER DURBAN AREA

by

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ABSTRACT

Research on stress factors among General Practitioners in relation to burnout is limited. In view of the clinical impression that stress is becoming more prevalent amongst Indian General Practitioners in urban areas, a study was planned to investigate the demographic variables, stress factors in practice and burnout among Indian General Practitioners in the Greater Durban Area.

The research design involved the analysis of data on demographic variables, stress factors in practice and burnout. This data was obtained from a sample of 106 Indian General Practitioners in the Greater Durban Area.

Informed consent was obtained by a letter that was sent to the General Practitioners. A Demographic Inventory, a 4 item Stress of Practice Questionnaire and the Maslach Burnout Inventory was administered by a postal questionnaire.

The analysis of the scores obtained from the Stress of Practice Questionnaire and the Maslach Burnout Inventory provided the following findings:

1. The stress of practice - 6 factors were identified of which 3 were related to demands of the job, work: home interface and workload.

2. The Indian General Practitioners experienced a low to moderate degree of burnout.

3. The correlation of stress factors and Maslach Burnout Inventory subscales were weak.

4. For emotional exhaustion - dimensions of frequency and intensity, some of the stress related factors explained a fair amount of variation but the relationship was not strong.

These findings lend themselves to further research in this field and have significant therapeutic implications for both practitioner and their patients.

SUPPORTING SERVICES

In this research the statistical planning and analyses, and recommendations arising from these analyses have been done with the support of the Institute for Biostatistics of the Medical Research Council.

PREFACE

This study represents original work by the author and has not been submitted in any form to another University. Where use was made of the work of others it has been duly acknowledged in the text.

The research described in this dissertation was carried out in the Department of Psychiatry, University of Natal, from 1 March 1991 to the end of April 1991 under the supervision of Dr F.B. Mansoor.

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CHAPTER 1

INTRODUCTION

1.1 A GENERAL EVALUATION OF STRESS

Stress in the last three decades has emerged as a central issue in the life of mankind. An enormous increase in the number of publications pertaining to the subject of stress relate to its nature, aetiology, consequence and management. The contribution of stress to physical and psychological complaints related to practice is recognized by General Practitioners (GPs) (Makin et al 1988). Morrice (1984) in a study of 156 GPs identified that 83% of them complained of periods of exhaustion, and 68% found their work stressful, with 8% complaining of being depressed. A large scale study of GPs in England (Cooper et al 1989), found that male doctors reported significantly higher levels of anxiety and lower levels of job satisfaction than other normative groups.

A literature survey covering a span of two decades reflects the growing need to recognise physical and psychiatric morbidity among doctors. Rucinski (1985) in a epidemiological study of doctors expressed concern about reliability, as doctors are reluctant to report on themselves or their colleagues. Several studies in the United Kingdom, North America, Australia and New Zealand on stress related conditions report a range of disorders from situational anxiety (Cramond 1969), depression (Bittker 1976), to more serious impairment including drug dependency (Modlin and Montes 1964, Vaillant et al 1972), excessive drinking (Murray 1976a, 1977), divorce (Taylor et al 1983), psychiatric problems (Murray 1977) and suicide (Rose and Rosow 1973, Steppacher and Mausner 1974,

Richings et al 1986). Stress can also lead to burnout, absenteeism, low morale and reduced efficiency and performance (Sutherland and Cooper 1990 p.165).

1.2 STRESS AND THE MEDICAL PROFESSION

> "The practice of medicine offers many satisfactions but there have been increasing sources of stress in the profession."
>
> (Mawardi 1979)

The medical practitioner encounters intensely emotional situations in the daily practice of medicine. Lief and Fox (1983) studied the psychological components of medical practice and reported on these situations. These involved the exploring, examining and cutting into the human body; dealing with despair of patients who report fear, anger and sense of helplessness; dealing with chronic or incurable diseases; meeting emergency situations; accepting the limitations of medical practice; being confronted with death itself. In addition the fear of contracting contagious diseases such as AIDS and talking to patients about marital and sexual problems can be stressful.

Doctors take on responsibilities for patients in the community or hospitals and acquire a reputation as being kind, conscientious, obliging, energetic, helpful or perhaps the opposite of all these (Bennet 1987 p.3). As skilled professionals their competence is constantly on trial and always visible. The repercussions of errors are enormous in terms of the well-being of society and lives of the individuals involved (Sutherland and Cooper 1990 p.165).

There is also the threat of negligence which has been exacerbated by increasing numbers of patients suing their doctors (Kelly 1990).

Medical practitioners over-work as much as others in different professional categories. Doctors work longer and more irregular hours, probably more so than other professionals and businessmen although this is against a background of financial security. Hospital consultants and private practitioners are in a position to determine flexible working hours and to control their professional and personal life style. However Bennet (1987 p.5) reported that many doctors, because of the nature of work, become trapped in a treadmill of overwork.

Doctors can maintain an effective practice of medicine depending on the physical, psychological and emotional energy that is put into work. This has to be balanced by satisfaction gained from the work and the doctor´s own recuperative capacity. When the level of satisfaction is low and energy input into work is high, then in time the doctor´s resources will be depleted. Overwork, denial of human limitations, responsibility and irregularity of work can deplete the doctor´s resources, recognized as a path to burnout (Bennet 1987 p.11).

1.3 STRESS AND THE GENERAL PRACTITIONER

The stress of GPs is unique as their work is responsible and responsive to a particular community. Features of general practice generating stress are characterized by the following:

1. Undifferentiated illness

2. GPs help patients to organize their illness into recognisable and treatable categories

3. Low technology

4. Use of estimates of probabilities and threats

5. Use of `time´

6. Person centred approach

7. Problems of compliance both for doctors and patients

8. Continuing care

9. Preventive attitude

10. Developmental approach

11. Selective use of resources eg. medical aid schemes

12. Responsibility to whole community

13. Need to tolerate uncertainty

14. Knowledge of other disciplines

15. High skills in interviewing

16. Care of defined `list´ of patients

17. Control over money and resources

(Freeling 1983 p.8)

The organization of the work varies according to the community being served and the GP's own personality (Freeling 1983 p.8).

Morrell (1981 p.1) emphasizes characteristics that differentiates GPs from hospital doctors. The GP can be approached directly by his patients, to whom he must be freely accessible without limit. He must be available to treat all types of diseases without restricting the responsibility to a particular episode of illness. The GP has to be prepared to maintain continuous care over a period. The work of the GP is conducted in relative isolation of his practice or the home, particularly as it relates to making decisions.

MacKichan (1972 p.2) found that one common factor that is demanded of the doctor is `time'. The amount of time the practitioner can devote to his patients is not dependent on his skills or personality. The efficiency of the doctor is lost without adequate time management and his expertise, sympathy and insight are partially wasted. `Time pressure' is a potential source of stress.

GPs in South Africa work in widely differing situations. The knowledge and skills required vary from urban to rural practice, from day hospital to mission hospital (Jaffe and Dornfest 1974). The Indian General Practitioners (IGPs) in urban areas, in the writer's experience, are subject to the stresses of practice as overseas studies indicate, although no epidemiological study has been done in this population.

1.4 MOTIVATION

A study of stressful factors in general practice, demographic data and burnout among IGPs would be of relevance to the following:

1. To provide additional data to our informational systems regarding the IGP.

2. To stimulate cross-cultural research.

3. To provide a foundation which will serve as a basis for constructive measures to reduce stress among IGPs.

In view of the above motivating factors, a study of the relationship between demographic data, stress factors and burnout was planned for IGPs in the Greater Durban Area.

1.5 AIM

To investigate the relationship between:

1. Demographic data and stress factors in practice.

2. Stress factors in practice and burnout.

1.6 HYPOTHESES

The following hypotheses will be tested:

1. Stress factors and burnout are high among IGPs.

2. Stress factors correlate with burnout.

CHAPTER 2

REVIEW OF RELATED LITERATURE

2.1 INTRODUCTION

> "The world has changed a great deal in the last century or so. Situations exist that were undreamed of a hundred years ago, and they affect us in many ways. Our awareness and self-consciousness enrich our existence but also open the way for stressful situations, many of which are understood only in terms of our modern culture."
>
> (Margolis and Shrier 1982 p.1)

The fact that stress is a threat to the quality of life, and to physical and psychological well being, is an unavoidable aspect of life. Stress is felt to be a corrosive, attacking force undermining or threatening the equilibrium and well being of the individual, it affects some people more than others (Pollock 1988).

2.2 HISTORICAL OVERVIEW

The word stress is derived from the latin word *`stingere´*, meaning to draw tight, and was used to describe hardships or affliction in the seventeenth century (Cooper et al 1988 p.9). In the nineteenth and early twentieth centuries the word had a loose association with ill health.

During the second world war situations of concentration camp, military combat and trauma were responsible for psychotic behaviour, severe anxiety, stomach ulcers and hypertension. Stress was attributed to the aetiology of these conditions (Holroyd and Lazarus 1982 p.3).

Sir William Osler in 1910 as quoted by Cooper et al (1988 p.10) identified the relationship between chest pains and hectic pace of life stress and strain causing disease. In 1928 Cannon's research focused on the sympathetic nervous system as a first line of defence against acutely stressful stimuli. These stimuli were a challenge to homeostasis through their combined effects upon physiological and psychological processes. During 1946 Selye introduced the concept of stress as the non specific response of an organism to any noxious or aversive stimulus. The term stress was recognized by Selye and was used particularly in engineering to denote the effects of a force acting against a resistance. The term stress is now used widely in scientific literature.

2.3 CONCEPTUALIZATION OF STRESS

> "The concept of stress is elusive because it is poorly defined. There is no single agreed definition in existence. It is a concept which is familiar to both layman and professional alike; it is understood by all when used in general context but by very few when a more precise account is required and this seems to be the central problem."
>
> (Cox 1978 p.1)

The concept has also been defined in terms of independent and dependent variables with wide discrepancies. Over the past 40 - 50 years the broad application of the stress concept to medical, behaviourial and social sciences has led to investigations from each of these perspectives (Sutherland and Cooper 1990 p.10). Three models of the stress concept will be discussed.

2.3.1 Response Based Model of Stress

The response base definition encompasses the response or pattern of response the individual manifests under pressure from a disturbing environment (Cox 1978 p.4). The stress is the response or pattern of response to environmental stressor as shown in Figure 1.

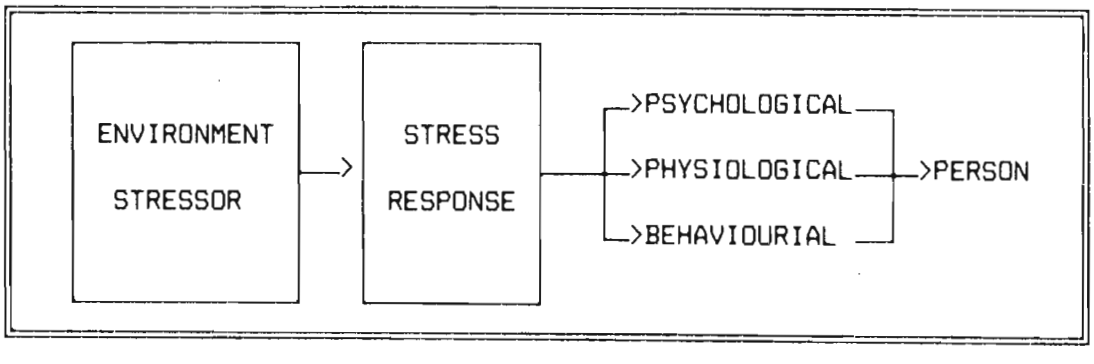

Fig 1: A response based model of stress (Sutherland and Cooper 1990 p.11)

The work of Selye (1946, 1956) began with this model of approach. Selye suggested that stress is the non-specific response of the body to any demand made upon it from the environment. The physiological response is manifested by the triphasic General Adaptation Syndrome.

The first stage is the `Alarm Reaction´ when the body shows characteristic changes of lowered resistance to the stressor. The state of alarm cannot be maintained continuously. Death or collapse may occur if the stressor is sufficiently severe. After the initial reaction the second `Stage of Resistance´ occurs. This stage differs from the Alarm Reaction as seen by changes in biochemistry. During the alarm stage reaction the adrenal cortex is depleted and there is haemoconcentration, hypochloremia and general tissue catabolism. In the Stage of Resistance, the adrenal cortex is full and there is hemodilution, hyperchloremia and anabolism. The third `Stage of Exhaustion´ has followed long term experience with the stressor. The General Adaptation Syndrome indicates that the body´s adaptability or adaptation energy is finite under constant stress and eventually exhaustion ensues.

The influential nature of Selye´s work served the General Adaptation Syndrome a dominant position in the scientific and behaviourial sciences. Researchers in recent times indicate that the response - stimuli model does not always follow the same pattern. Responses are stimuli-specific and depend on the type of hormone output (Sutherland and Cooper 1990 p. 14).

2.3.2 Stimulus Based Model of Stress

This model has its roots in engineering in which external stresses give rise to strain or distortion. Kaminoff and Proshansky (1982 p.380) identified that stress is experienced by individuals as a consequence of environmental stimuli. External sources of stress impinge on the organism in a disruptive way. These range from intense noise, overcrowded spaces, air pollution, light and temperature extremes, fires, crimes and many others (Figure 2).

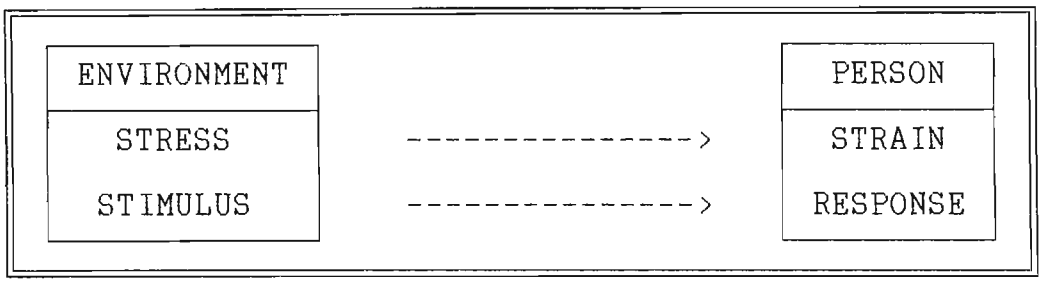

Fig 2: Stimulus based model of stress (Cox 1978 p.4)

The coping strategies and individual needs in response to environmental stimuli determine the day to day functioning of the individual. The environment is either congruent or incongruent with the person's need at a particular time and place. Stressors are potentially more demanding if the environment deviates from personal requirements. Although this model has limited use, it is particularly necessary in organizations to identify common stressor patterns that may affect the work force (Sutherland and Cooper 1990 p.17).

2.3.3 Interactive Model of Stress

Cox (1978 p.18) proposed a transactional model of stress incorporating the previous models. Five stages are proposed within this framework.

Stage 1: The first stage is the demands of the external environment on the person with his/her internal needs which may be of a physical or psychological nature.

Stage 2: The second stage is concerned with how the individual perceives the demand and his/her capacity to meet that demand. If there is an imbalance in the appraisal between the perceived demand and perceived capability, stress will occur.

The potential source of stress is reviewed in the presence of individual differences, subjective experience of stress, situational factors, coping and response behaviour.

Stage 3: The third stage represents the response to stress concerned with psychological changes and individual coping methods.

Stage 4: The fourth stage is concerned with consequences to stress that include both actual and perceived.

Stage 5: The final stage is concerned with feedback which occurs in all other stages in the system of stress and has effect at each of these stages.

Contemporary approaches to the study of stress emphasize appraisal and coping factors (Fisher 1984 p.242, Cooper et al 1988 p.56, Folkman and Lazarus 1988). Appraisal refers to the evaluation of situations into primary and secondary forms. The primary appraisal contributes to the emotional quality and intensity o the encounter. The secondary appraisal takes into consideration the demands of the encounter. The outcome of these appraisals will determine what coping strategies will be used.

Folkman and Lazarus (1988) stated that

> "appraisal of the person and his environment, are influenced by antecedent person characteristics such as pattern of motivation (eg. values, commitments and goals), beliefs about oneself and the world, and recognition of personal resources for coping such as financial means, social and problem solving skills, and health and energy.

> Individual differences in these variables help explain why an encounter may be appraised as a threat by one person and as neutral or a challenge by another".

Coping in recent research has focused on the stress experience and adaptation. Coping refers to cognitive and behaviourial efforts to manage environmental demands and internal demands and conflicts among demands. Coping is characterized by a high degree of variability among and within persons. Coping is a multidimensional process as reported by Folkman and Lazarus (1988) who examined 100 middle aged adults. They not only met with a single response but by a collection of both emotion-focused and problem focused coping activities.

2.3.4 Personality Factors and Stress

Certain identified dimensions of personality predispose to stress vulnerability. Characteristics between high and low stressed individuals vary according to three types of personality:

A Type A Behaviour Pattern
B The Hardy Personality and
C Locus of Control.

A. Type A Behaviour Pattern

The term Type A Behaviour Pattern, known as coronary prone behaviour was introduced by Friedman and Rosenman (1974). This behaviour pattern was described as:

> "A particular complex of personality traits, including excessive competitive drive, aggressiveness, impatience, and a harrying sense of time urgency. Individuals displaying this pattern seem to be engaged in a chronic,

> ceaseless, and often fruitless struggle with themselves, with others, with circumstances, with time, sometimes with life itself. They also frequently exhibit a free floating but well-rationalized form of hostility, and almost always a deep-seated insecurity."
>
> (Friedman and Rosenman 1974 p.4)

Such individuals exhibit biochemical and endocrine changes associated with overt coronary disease, elevations in coronary risk factors and cardiovascular arousal which might be expected to precede coronary artery disease. Catecholamines probably play an important part in mediating these interactions. Static measurements show no difference in heart rate or blood pressure but only in arousing situations are these parameters increased (Friedman and Rosenman 1974 p.173; Rosenman and Chesney 1982 p.556).

Type B individuals are characterized by an absence of Type A Behaviour Patterns. These individuals exhibit no excessive competitive drive or sense of time urgency. Life is easy going. Type A Behaviour is not regarded as a static personality trait but a style of behaviour which persons habitually display to challenging situations. This predisposing behaviour may act as an intervening factor, with work and family stress factors resulting in disease enhancing conditions.

Lutz et al (1987) in a review of Type A and Type B persons, found only 6 of 24 experiments that revealed a reliable difference in heart rate, only 4 of 18 experiments revealed a reliable difference in diastolic blood pressure, and only 13 of 20 experiments revealed a relative difference in systolic blood pressure.

Lutz et al (1987) in a study of 71 males and 70 females concluded that although Type A patterns are at a greater risk for coronary disease, higher physiological arousal showed no guidance, and that other factors could be responsible.

B. The Hardy Personality

Resistance to stressful events in some individuals has been accounted for by hardiness of personality. Kobasa et al (1985) considered this style of personality that expresses commitment, control and challenge. Persons generally curious about, and interested in activities, things and people involve themselves as a tendency of commitment. Control is defined as the ability to believe and act in a way to influence the course of events. Challenge involves the expectation that it is normal for life to change and that change will be a stimulus to personal growth.

Hardiness is useful as a cognitive appraisal of stressful events, facilitating a form of coping and the ability to keep stressful events in perspective. Persons with these resources will transform stressful events into less stressful forms and use them as potential opportunities for change.

Persons who lack hardiness find the environment threatening, boring and meaningless. The inability and feeling of powerlessness in the face of overwhelming forces are unwelcome. These persons have the tendency to be passive in their interactions with the environment.

Their personalities do not assist them to make optimistic appraisals or decisive actions, that could transform stressful events which have a detrimental effect on health (Kobasa et al 1985).

Although this personality is demonstrated by prospective research findings, the sampling is limited to male, middle and upper-level executive and professional groups only.

C. Locus of Control

Rotter (1966) based the concept of Locus of Control on the social learning theory. Individuals, according to Rotter (1966), feel that they have control over situations through modelling, past experience and reinforcement of certain behaviour that have an effect on expectancy.

Individuals with internal Locus of Control (internals) believe they have control over what happens in stressful situations and take personal responsibility. Individuals with external Locus of Control (externals) believe that they have little influence on situations and outcomes. Internals can effect change in the environment as they are confident and assertive while externals believe they have little power to change or produce change with feelings of hopelessness and helplessness (Seligman 1975 p.99).

2.3.5 Life Events and Stress

Individual's vulnerability to stress can be influenced by events in life. The impact of stress on the individual may lead to disruptive behaviour, inadequate functioning and productivity. The amount of change will determine the harm that takes place.

Life events research can be traced to Cannon (1928) and Selye (1946) who showed the relationship between stress and illness. Following in their path Rahe et al (1964) investigated the relationship of environments to the time of illness onset.

They formulated the Schedule of Recent Experiences (SRE), a self administered questionnaire used to document demographic data related to major social readjustment. This data included items such as residence, occupation, social and marital status, personal and economic factors and health status. Rahe et al (1964) concluded that life events in the years prior to the onset of illness were best correlated with the onset of illness. These events were felt to be contributory and necessary but not sufficient factors.

Holmes and Rahe (1967) adapted and changed the SRE by constructing the Social Readjustment Rating Scale (SRRS) with 43 events, that weighted each event in order of importance, using a ratio scale to estimate the amount of change. Each life event was rated on a 100 point scale and the highest on the scale was `Death of Spouse´ with a mean value of 100 and the lowest was for `Minor violation of the Law´ with a value of 11. Events can have both positive or negative connotations thus adjustment to these events can be manifested by different behaviourial patterns. In their studies higher scores related to the onset of illness within the following 2 years. Masuda and Holmes (1967) demonstrated a high degree of consensus about the significance of life events among American and Japanese individuals.

In recent years many criticisms have been focused on the study of life events as it does not take into consideration the individuals perception of events (Vingerhoets and Marcelissen 1988). Cooper et al (1988 p.3) find that the list of life events may be a consequence or symptoms of illness and which may prevent the subject from accurately recalling past events.

2.3.6 Learned Helplessness and Stress

Seligman (1975) introduced the concept of Learned Helplessness. It is a response which arises when events are uncontrollable. The exposure to severe chronic stressors uncontrollably `Distort the Perception of Control´, (Seligman 1975 p.37) giving rise to feelings of helplessness, that lead to the development of clinical depression and anxiety. Fisher (1984 p.243) regards helplessness emanating from unpleasant conditions as failure and loss of prestige but is not a sufficient condition for depression. Self blame is an added factor contributing to loss of control. Self blame is perceived failure inherent in some individuals which is likely to arise at the point of secondary helplessness (tried but failed) (Fisher 1984 p.243).

2.3.7 Social Support and Stress

Social support is related to mental health outcome of stress (Cohen and Wills 1985). The beneficial effects of social support provide the individual with positive experience and socially accepted roles in the community. Psychological or physical disorders may be alleviated by social networks which help to avoid negative experiences such as economic or legal problems (Cohen and Wills 1985).

Lieberman (1982 p.778) states that theoretically, social support can influence the occurrence and effects of stress in a variety of ways:

1. The occurrence of stressful events can be decreased by social supports.

2. The potential stressful event can be mitigated by interaction with significant others who can modify or alter the individual´s perception.

3. Social support can change the relationship between role strain and the stress inducing agent.

4. Social support can modify the linkage between stress event and effect by influencing coping strategies.

5. Social support can modify stressful events that erode self esteem and helplessness.

6. Direct social support on adaptation can influence stress.

Social support both at work and from within the immediate family and community, can buffer the consequences of stress.

2.4 BURNOUT

> "Stress contributes to strain, and efforts by individuals and groups to cope with that strain leads to the emotional detachment and withdrawal commonly associated with burnout."
>
> (Cherniss 1980 p.43)

The link between excessive and prolonged levels of job stress and burnout is recognized in the literature. The link between GP stress and burnout will be discussed in relation to its concept, theory and the various phases and signs and symptoms of burnout.

2.4.1 Burnout Concept

Freudenberger (1974) working with others in the free clinic movement developed the concept of burnout as:

> "to fail, wear-out, or become exhausted by making excessive demands on energy, strength, or resource".

Paine (1982 p.17) found that

> "The noun dates back to the mid 1970's, but probably has many roots, including the psychiatric concept of patients who are burnt-out. It also has many definitions. The common aspect involves physical, emotional, spiritual, intellectual and interpersonal exhaustion".

Pine and Maslach (1978) after extensive studies among human services professions attempted to define the social and psychological dimensions of burnout. They conceptualized burnout as:

> "a syndrome of physical and emotional exhaustion, involving the development of negative self concept, negative job attitudes and loss of concern and feeling for clients".

Edelwich and Brodsky (1980 p.13) find that it is easier to observe the condition than to define burnout. They suggest a working definition of burnout:

> "as a progressive loss of idealism, energy and purpose, experienced by people in the helping professions as a result of the condition of their work".

Carroll and White (1982 p.41) viewed burnout as a form of Ecological Dysfunction.

> "Since burnout is a work-related concept, the work environment generally receives considerable attention; however other environments or ecosystems can and do play an important role in determining whether or not, to what degree, and in what fashion a person will experience burnout".

Cherniss (1980 p. 16) defined burnout as:

> "psychological withdrawal from work in response to excessive stress or dissatisfaction".

The term also refers to the loss of enthusiasm, excitement and a diminished sense of mission in one´s work (Cherniss 1980 p. 16).

From the preceding definitions of burnout, Maslach (1982b p. 31) identified common threads in the work of writers as follows:

1. Burnout occurs at an individual level.

2. It is an internal psychological experience involving attitudes, motives, feelings and expectations.

3. It is a negative experience for the individual, that includes distress, discomfort, dysfunction and negative consequences.

2.4.2 Burnout Theory

As with differences over the definition of burnout and the complex roots of burnout, a basic theoretical model of burnout needs to be developed.

Carroll and White (1982 p.41) noted in their review of the literature that writers on the subject tend to overemphasize either environmental variables or personal variables.

Several models of burnout process utilize the Psychoanalytic View, Social Competence Model, Disruption of Cybernetics Theory, and Meier´s Theory. These focus on an individual perspective.

In Carroll and White´s model of Ecological Dysfunction, a systems approach is applied to burnout taking into consideration that burnout is a work related concept. Carroll and White suggest that other environments or ecosystems interact reciprocally with the individual to fashion the burnout experience. Work stress and a frustrating working environment interact with personal variables that influence other ecosystems such as the family.

The ecological model is inclusive of the person (worker) and the following environmental components: Microsystems, the Mesosystem, the Exosystem and the Macrosystem (Figure 3).

Carroll and White (1982 p.41) put forward specific personal factors, specific ecosystem factors and system factors contributing to burnout. These factors are described as follows:

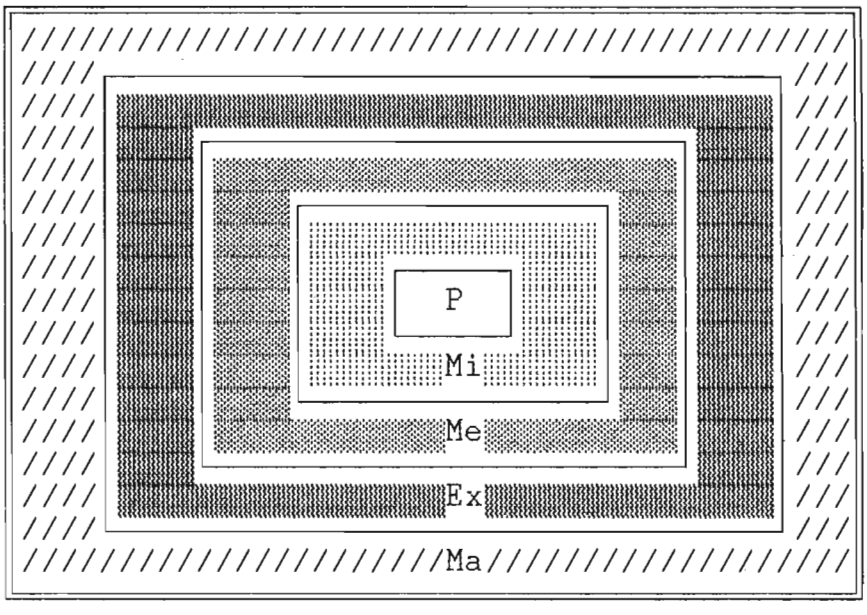

Fig 3: Environmental components (Carroll and White 1982) · Microsystems, Mesosystem, Exosystem and the Macrosystem

P = Person

Mi = Microsystems - smallest unit of organized work (eg. office or practice)

Me = Mesosystem - the largest complex of smaller work unit (eg. company, institution, agency)

Ex = Exosystem - non-work ecosystem which directly impact on the worker and his/her organization´s operation (eg. family, legislation, community)

Ma = Macrosystem - larger cultural and world wide complex.

1. Specific Personal Factors

Personal factors such as genetic endowment, growth and development, physical health, education and skills, motivations and interests, behaviour patterns especially related to general life experiences, mental health, work history, personality and interpersonal relationships. The individual's perception and interpretations of the sources of stress and frustration has to be addressed.

Other factors such as inadequate education and training, unresolved unconscious conflicts, the inability to seek assistance from others or admit to personal limitations were put forward, requiring attention in the burnout context.

2. Specific Ecosystem Factors

As the individual moves from one system to another (that is mesosystem to exosystem), new norms, power hierarchies, roles, needs, demands, communications and so on are experienced. When applying this perspective to burnout, one has to take into account how the person adapts and interacts with each environment. The person-environment match will determine to a great extent, the quality of life experienced in that particular system.

3. System Factors

Boundary issues is the first factor that delineate various territories (that is departments, companies) and certain levels or types of works (social workers, nurses, upper management) to counter entry and exit, and to regulate channels of communications. Boundaries may be open or closed and this will influence the experience of burnout.

The task/role-person match/ mismatch is the second factor. There are twelve role-conditions that are described, 2 examples are:

a) The incongruity between the individual's knowledge and skill level, stress of tolerance and the particular role and the stress management style that is approved within an organization can lead to burnout.

b) Insufficient role feedback in terms of adequate ways of improving and adequacy of adjustment to the work situation also contribute to burnout.

The third factor is the feasibility, clarity and support for goals and objectives of the system which will determine the degree and extent of burnout.

Fourthly, the relationship between obstacles/resources and burnout will be of significance to the person.

Finally, the interface issues between one's life space or system to another (eg. microsystems to mesosystem) the flexibility and need to adapt to changing demand, will determine the burnout level.

Roberts (1986) proposed a model of burnout (Figure 4) as an integration of other models.

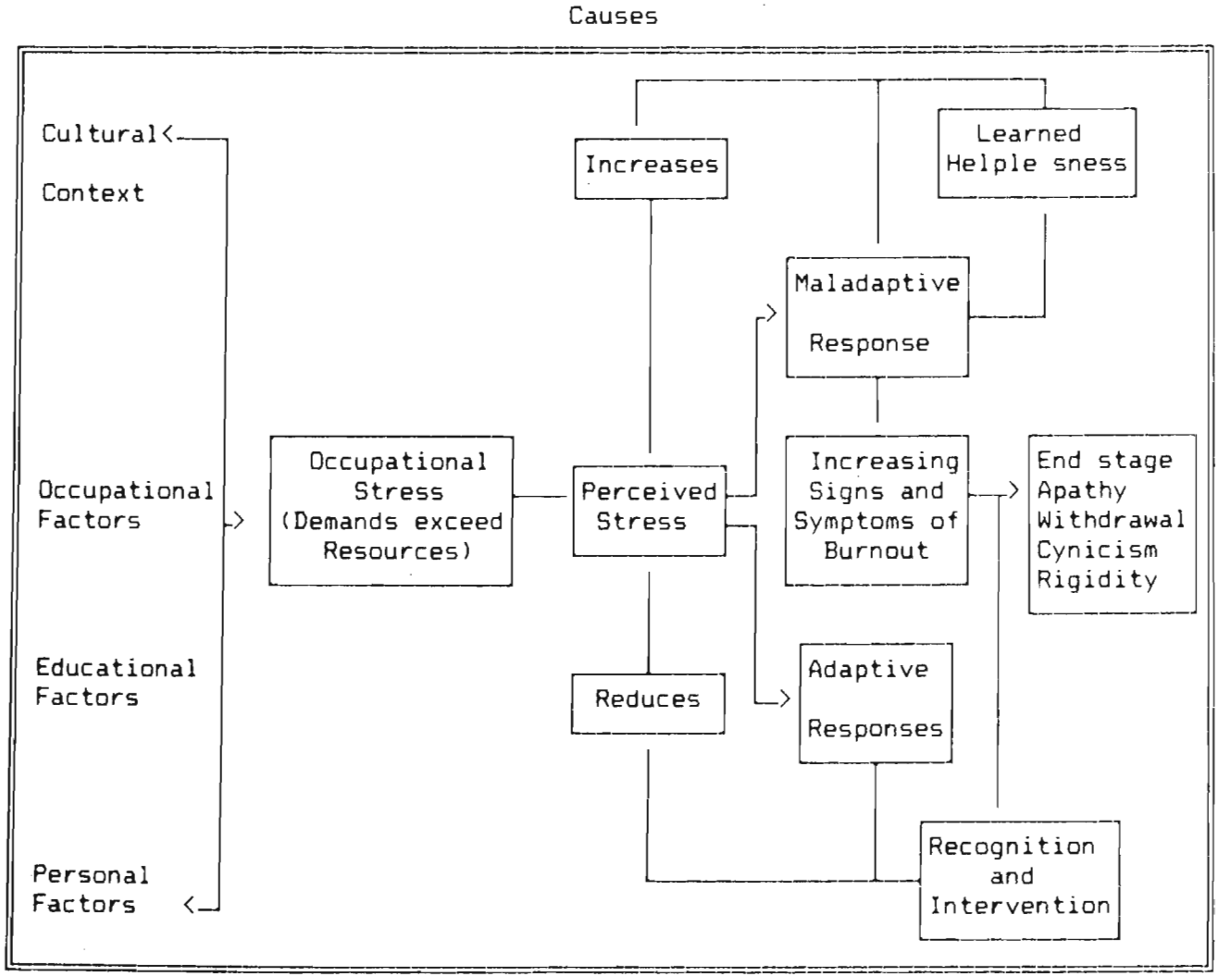

Fig 4: A model of burnout (Roberts 1986)

2.4.3 Stages and Symptoms of Burnout

A number of phases or stages of burnout has been recognized by various writers. Some relate to the type of symptoms experienced (Freudenberger 1974; Edelwich and Brodsky 1980 p.28; Maslach 1982b p.29) and others to a combination of symptoms and prognosis (Maslach 1982a p.75). Table 1 gives a comparison of the different phases or stages of burnout proposed by various authors.

TABLE 1

Comparative Stages in the Burnout Process

Freudenberger 1974	Edelwich & Brodsky 1980	Maslach 1982	Pine and Aronson 1988
1. Physical Signs of Burnout Headaches, Gastrointes Tinal Tract symptoms, exhaustion, fatigue, psychosomatic complaints	1. Enthusiasm High energy, Unrealistic expectation, Voluntary overwork.	1. Physical & Emotional Exhaustion Signs and symptoms short lived.	1. Physical Withdrawal Distancing from clients, Minimal time spent with clients.
2. Behavioural Signs Detachment Boredom and cynicism Impatience & irritability Omnipotence	2. Stagnation No job thrill realization of personal needs	2. More Regular Symptoms negative & cynical thoughts	2. Emotional Withdrawal Avoidance of over involvement. Loss of concern for clients
Suspicion of being un-appreciated Paranoia Disorientation Denial of symptoms	3.Frustration of Patient/ bureaucracy /job situation 4. Apathy Minimal time spent with clients.	3. Symptoms continuous serious physical & psycholog-ical symptoms	3. Mental withdrawal Use of intellectual-ization cynical remarks

The most common model is that of a three phase model utilized by Maslach (1978), Maslach and Jackson (1981b), Maslach (1982a).

1. First Phase

The signs of burnout are occasional and short. The individual is emotionally and physically exhausted with symptoms of cold, flu, headaches and other psychosomatic symptoms. Rest, exercise, relaxation can all help to return the person to normal.

2. Second Phase

The symptoms are more regular and more intense to eradicate. Clients are perceived in a cynical and dehumanized way. Clients are viewed as deserving their problem. Concern over effective functioning becomes a disturbing and central issue as the care of clients deteriorates.

3. Third Phase

The symptoms are non-continuous, physical and psychological symptoms develop with an inability to deal with emotional stressors of their job and negative signs. There is social withdrawal and life appears to be out of control. Job changes with increase use of alcohol and other drugs are taken as a way of reducing tension and feelings of depression.

Edelwich and Brodsky (1980 p.29) point out that burnout does not follow a linear progression but is more of a cyclic phenomenon. The burnout cycle may repeat itself in the same job or in different jobs. Intervention at any point of the cycle may occur but it is more difficult at the final stages.

2.4.4 The Stress/Burnout Connection

Stress and burnout are often confused and terms are sometimes used synonymously. However Paine (1982) and Brill (1984), would agree that these terms are not identical (Mills 1986 p.32). Stress has its own definitional problems which were discussed earlier on.

Pine and Aronson (1988 p.11) find that:

> "stress, in and of itself, does not cause burnout. People are often able to flourish in stressful demanding careers, if they feel valuable and appreciated and that their work has significance. They burnout when their work has no meaning and stress continuously outweighs support and rewards".

Brill (1984) acknowledges that stress can lead to burnout, but not all individuals who are stressed burnout.

Cherniss (1980 p.158) states that burnout is the result of stress when the imbalance between job demands and the work's resources lack positive interventions.

Maslach (1978) believes that providers of human services are prone to burnout as stresses are inherent in their job. These stresses arise from helper and client interaction.

McConnell (1982 p.116) finds that burnout does not occur from one or two stressors but from chronic unrelieved emotional stress that has not been recognized and managed.

Brill (1984) concludes that stress if recognized early and managed will run a different course (Figure 5).

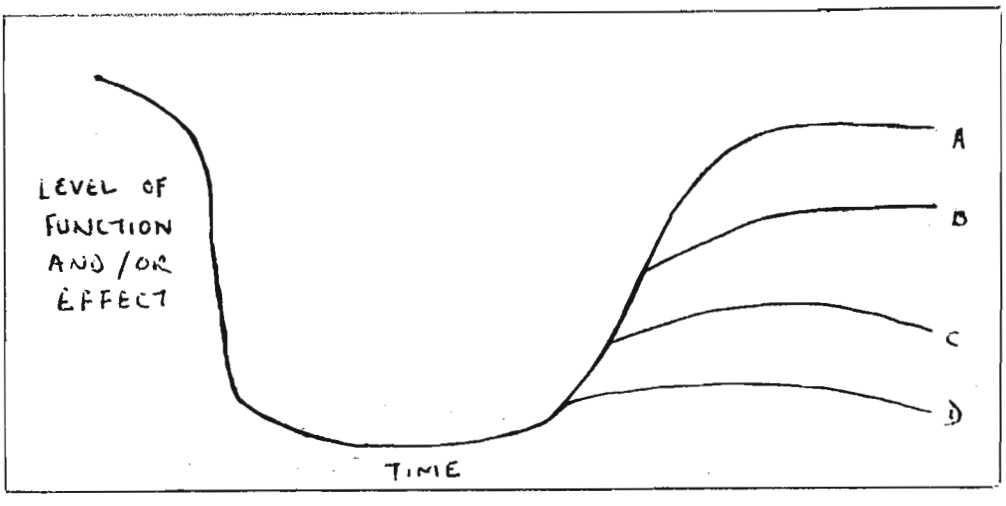

Fig 5: Course of stress versus burnout (Brill 1984)

A and B represents effects of stress outcome.

A indicates return to baseline.

B indicates towards adaptation.

C and D represent burnout because C shows no movement and D indicates decay.

Therefore the view is that there is usually some recovery or adaption to stress, whereas a burnout person never quite recovers to his normal functioning. Therefore burnout is work related and is one result of occupational stress.

2.4.5 The General Practitioner and Burnout

2.4.5.1 Definition of a GP

A definition of a GP is necessary as it undertakes to define the work role. The College of Medicine of South Africa have modified the definition of the Royal College of GPs definition of 1961 to apply it to South African conditions (Jaffe and Dornfest 1974).

"The GP is a doctor who provides personal, primary and continuing medical care to individuals and families. He may attend his patients in their homes, in his consulting room or hospital. He accepts the responsibility of making an initial decision on every problem his patient may present to him, consulting with specialists when he thinks it appropriate to do so. Ideally he will work in a group with other GPs, from premises that are built or modified for the purpose, with the help of paramedical colleagues, adequate secretarial staff and all the equipment which is necessary. Even if he is in a single-handed practice, he will work in a team and delegate when necessary. His diagnosis will be composed in physical, psychological and social terms. He will intervene educationally, preventatively and therapeutically to promote his patient's health."

2.4.5.2 Sources of Occupational Stress Among GPs

"Work and the organization of work is an important facet of social life."

(Armstrong 1990)

Human beings in industrialized societies spend more time at work than at home. Stressors encountered at work make up the bulk of the overall environmental stress in relation to other life stresses (Cooper et al 1988 p.80).

Sutherland and Cooper (1990 p.24) identified 5 major categories of stress concerned with work. These include the following:

1. Factors intrinsic to the job - Stressors include poor physical conditions, workload, time pressures, decision making and so on.

2. Role in the organization - Role ambiguity, role conflicts and responsibility for people.

3. Relationships within the organization - That is superiors, subordinates and colleagues.

4. Career development - Over promotion/under promotion and lack of job security.

5. Organizational structure and climate - Restriction on behaviour, office politics and culture of the organization.

The above stressors are associated with a particular job which are perceived as negative environmental factors.

Extra-organizational or outside work environment stressors include family problems, life crises, financial difficulties and so on, that spill into the work sphere.

Features of work stress interact reciprocally with individual personality characteristics and extra-organizational stressors. The resolution of these interactions will determine either coping or maladaptive behaviour and stress related disease (Cooper and Marshall 1976).

Stress among doctors is rated high (6.8), according to the Cooper Occupational Stress Rating, when compared with other categories. The highest average rating being 6.4 (Cooper et al 1988 p.81).

A recent review of the GP literature, both local and overseas suggests that stress of practice is on the increase (Makin et al 1988, Cooper et al 1989, Kelly 1990, Habib 1991).

GPs like all other helping professions react to stress and strain of practice that may lead to burnout. Pine and Aronson (1988 p.84) identified 3 characteristics that make the human services profession more vulnerable to burnout:

1. The performance of emotionally taxing work.

2. Inherent personality characteristics that attract persons to the human services.

3. A client centred orientation is shared by them.

In addition, working over long periods under emotionally demanding situations exposes helpers to their clients psychological, social and physical problems. The intensity of these interactions and the particular demands of the job and the available resources determine the extent of burnout (Pine and Aronson 1988 p.84).

Freudenberger (1975) from his own personal experiences, notes that the dedicated and the committed who work long hours `walk into a burnout trap´. The helpers need for acceptance and `giving´ to his clients are conditions prone to burnout.

According to O´Dowd (1987) burnout in GPs may come about as `vocational training creates expectations of certain standards´. The GP recently in practice may attempt to achieve too much in a short period of time that may lead to frustration and burnout.

Although the modern clinician is a more powerful doctor than his forebears, doctors are dissatisfied, demanding and lacking in self respect (Bourne and Lewis 1977). GPs particularly feel a sense of personal failure, disenchantment, anger, gloom and bewilderment as they can do little to affect their patient's illnesses (Bourne and Lewis 1977). AIDS, Cancers, Heart Attacks, proliferate while Infectious Disease are still with us in South Africa.

In the South African context, according to Habib (1991), GPs are under constant stress and pressure from a variety of sources. These include the proposed change in the Medical Scheme Act, the limiting of dispensing by doctors, Medical Aid Financial problems and media pressure by vested interests. In Britain and United States the clinical authority of the medical profession has suffered a steady decline over the last 20 years. Severe restrictions have been placed on clinical freedom by government and medical insurance companies (Armstrong 1990).

Sources of Occupational Stress are divided into:

A Intrinsic Factors
B Extrinsic Factors

A. Factors Intrinsic to General Practice

1. Working Conditions

As early as 1968 Mechanic stated that:

> "the average doctor responds to his growing practice and, increasing demands on his time not by continually increasing his work week in comparison with those who have much

> smaller practices, but by practising at a different pace and style. He thus feels deprived not only in terms of the hours he devotes to his patients but, more importantly, in terms of the amount of work and effort he must pack into this period. Such a pattern of work requires doctors to practice on an assembly line basis, which diminishes the unique satisfactions possible in a general practice."

Most GPs according to Chambers (1989), spend the whole of their working lives with regular night time and week end commitments. Doctors spend up to 33 hours or more with continuous weekend duties.

2. Work Load

Studies show wide variation in the workload of GPs. The 'normal working week' of GPs according to Thomas et al (1989), varies in the region of 38 hours, which include 24 hours of patient contact and 5 hours of travel to home visits.

GPs see up to 150 patients or their representatives in the surgery and make up to 26 home visits per week. Taking into consideration holidays and sick leave in an average week, GPs' undertake 90% of this load.

Pitts and Whitby (1990) in a study of out of hours work load of a training practice in suburban and semi-rural area of England in one year found an overall rate of contact of 273/1 000 patients. Of the patients who made contact 44% were given advice by telephone while 4.9% were admitted to hospital.

Vaillant et al (1972) found that long hours and demands of patients make doctors more vulnerable to bad marriages and drug abuse.

Long hours also contribute to fatigue and sleep deprivation that may adversely affect cognitive functions and mood especially after night work (Orton and Gruzelier 1989).

3. Time Pressures

Wilson et al (1991) in a review of the literature, found that lack of time is a major contributor to stress among GPs. In a controlled trial by Wilson et al (1991), longer booking intervals in general practice affected their self assessed levels of stress and arousal. GPs' who booked at 10 minute intervals (experimental sessions) were compared with GPs' who booked at 7.5 to 5 minutes intervals (control sessions). There was no significant differences in stress or arousal at the beginning of the sessions. Stress scores were lower and arousal scores higher for the experimental sessions than the control sessions. At the end of the study favourable mood changes were seen in the experimental than the control sessions which indicated a definite psychological advantage to GPs in the former group.

Mechanic (1968) found that the demands on a doctor's time impairs GPs from providing psychological care to his patients. Howie et al (1989) studied the association between short and long consultations in the detection of psychological issues. When working faster, doctors deal less accurately with psychological problems.

4. Interruption

Makin et al (1988) found that unpredictable interruptions and unplanned events were the greatest source of stress to the doctor and his family. Telephone calls during normal hours or after hours or on week days and weekends were regarded as serious enough cause of stress for the whole family (Gray 1982).

Martin (1981) notes that family life is disrupted by frequent interruptions by telephone calls at irregular hours. Bennet (1987 p.37) finds that the doctor's wife and children have to adjust to distraught people calling at irregular hours.

5. Locum Tenens

Allibone et al (1981) in their survey of 1 500 doctors noted that 25% of GPs worked single handed or had only one partner. These GPs were particularly anxious as they did not have sufficient means to meet the cost of a locum.

The fear of losing patients, the mismanagement of patients and the omnipotence of GPs in their practices is often discussed among GP circles when locums are employed. As a result GPs very infrequently employ locums. This leads to lack of leisure time for the GP and his family which exacerbates the over work situation.

6. Difficult Patients

Fraser (1984) finds that patients may be difficult either because of their problem or their personality. The management may be difficult for one doctor but not for another doctor.

Kirkby (1990) takes a different view. Difficult patients never get better although they are extensively investigated and medicated but return to haunt the GP. These patients make the GPs groan inwardly and make their 'heart sink'.

Four categories of difficult patients were classified and defined by (Groves 1951):

a. The 'dependent clinger' who seeks repeated reassurances about minor problems from the doctor but expresses excessive thanks and gratitude.

b. The 'entitled demander' who frequently complains to health authorities about imagined short comings in the service received and views the doctor as a barrier to receiving the services.

c. The 'manipulative help rejector' who leaves the doctor powerless with a series of symptoms.

d. The 'self destructive denier', for example the patient with severe chronic obstructive airway disease who refuses to stop smoking.

Mendelsohn (1990) described another category of patients who pressurize GPs' to satisfy their demands. These demands may be unacceptable to the GP. They are faced with the dilemma of meeting these demands or losing such patients. The 'entitlements' to keep the customer satisfied against appropriate medical and ethical issues weakens the doctor-patient relationship. Doctors become less effective healers and more dissatisfied.

The increasing expectations of patients to improve in a short-while leaves most doctors with a sense of personal failure (Bourne and Lewis 1977).

7. Administration and Finance

> "As far as the private sector is concerned the family practitioner is the worst-paid of all the professions. The present system of payment for GPs is not conducive to optimal care."
>
> (Bundred 1985)

According to Adam (1991) the recommendations to amend the Medical Schemes Act of 1967 has served to increase the dissatisfaction of the medical profession especially GPs. The major changes proposed are the following:

a. Removal of direct and guaranteed payments to doctors.

b. The removal of a statutory scale of benefits by medical aids.

c. Removal of the distinction between medical aid schemes and medical benefit funds.

d. The removal of minimum benefits to doctor.

e. Removal of disciplinary procedures against medical schemes.

f. The removal of a uniform scale of benefits.

g. Power base for the representative association of medical schemes.

Doctors feel that the draft bill was drawn up without prior consultation with their representative organization, leaving them more dissatisfied.

Cassimjee (1989) reports on the Medical Dental and Supplementary Health Services Professions Amendment Act No. 58 of 1984, as a measure to restrict the right of doctors to dispense medication to their patients. GPs' who have been dispensing for decades in South Africa find this act unacceptable.

van Niftrik (1985) found that the financial burden carried by GPs on top of long hours, responsibility, lack of leisure time and the demands of patients, makes the whole situation intolerable. GPs carry huge book debts that have to be offset by over drafts and interest. They find themselves taxed on book debts which might be difficult to recover without costs or interest.

Mendelsohn (1990) found that the payment for health care was low on family budgets but at the same time GPs were expected to meet the demands and whims of patients. Medical Aid Schemes remunerate doctors well below the recommended rates as suggested by the Medical Association of South Africa. A vicious cycle is created by low fees and low self worth, resulting in feelings of being stressed.

8. Dealing with Death and Dying

Doctors are uneasy about accepting the role of caring for dying patients. Although doctors are trained to treat patients with acute illnesses, not enough has been taught about caring for dying patients and others with incurable diseases. Buckman (1988 p.7,8) has proposed three reasons:

a. Death is excluded from the early life cycle of most people.

b. Dying is set apart from everyday healthy life experience.

c. Dying has become the province of experts.

Goldie (1982) states that dealing with cancer is most problematic for doctors. The disclosure about cancer is difficult as it may stem from the doctor's own anxiety about death (Martin 1981). Goldie (1982) elaborates on the issue of dealing with cancer by suggesting that bald unprepared truth and lies can be damaging.

Perlman (1988) concluded on the issue of terminal illness disclosure as the `great taboo of the twentieth century'.

9. Medical Responsibility for Colleagues and Medical Families

Doctors and their families receive less than optimal medical attention for a variety of reasons (Nelson 1981). Doctors deny personal illness in order to ward off weakness, poor performance and admission of failure.

Medical health of doctors families is subjected to improper consults with close associates or specialists.

Interference by means of withholding sensitive information compromises consultation further. The treating doctor is further impeded by over identification with the doctor and his family, resulting in over or under diagnosis and treatment. Doctors rarely relinquish responsibility and control to the treating doctor. Nelson (1981) notes that doctor-patient relationships are undeniably different due to social and colleague connections.

B. Factors Extrinsic to General Practice

A literature survey reveals that only one factor has been delineated thus far. This pertains to the Individual characteristics of GP's.

> "The individual's personality, coping strategies, and the number and nature of events encountered are seen to virtually effect stress vulnerability."
>
> (Cooper et al 1988 p.46)

Characteristics of individuals attracted to a medical career has been reported on by Martin (1981). In conducting more than 600 interviews with potential medical students, it was found that compulsive personality traits were disproportionately present. These traits contribute to diligence, conscientiousness, achievement-orientation and inflexibility in the work situation. Long hours with fixed patterns of practice and life style are manifestations of compulsive traits. Frequently doctors become trapped in a treadmill of overwork (Bennet 1987 p.5).

Vaillant et al (1972) in earlier findings reviewed the early childhood of doctors. In a 30 year longitudinal study of 268 college students chosen on the basis of academic success and physical health, it was noted that 47 students went on to attend medical school.

These 47 students were compared with 79 socioeconomically matched controls selected from the larger sample. All the participants were followed up by questionnaires and interviews over a 30 year period. Results showed that the doctors differed significantly from the controls. Doctors had more unstable childhoods and emotional difficulties in adult life predisposing them to substance abuse.

Modlin and Montes (1964) in a 15 year study of 65 doctors with narcotic addiction, diagnosed one doctor as schizophrenic and the others as compulsive, passive aggressive, narcissistic and dependent personalities.

Rhoads (1977) identified certain personality types among lawyers, doctors and accountants who over worked and were self employed. He noted that inherent in their personalities was a lack in their ability to regulate work, coupled with problems in dealing with aggressive impulses and guilt feelings. Insecurity of early life with unpleasant and demanding parents often emerges as the need for love and attention in adult life.

Knight (1983) noted a number of characteristics that motivated individuals to study medicine. He grouped them into three categories:

a. Motives arising from inner needs

The fear of death as a reason to choose medicine secured the future doctor from death by becoming a healer.

The need to rescue and be appreciated by financial and social status also acts as a motivating factor. Other motives may be the accrual of professional life status.

b. Motives Arising from Vocational Appeal

Medicine is seen as challenging, versatile and enjoyable, with career options and job freedom. The appealing image of great physicians and GPs may influence the choice.

c. Motives Arising from Conceived Purposes

The attraction to medicine is fostered by the need to care, provide, dispense and to combat suffering. Altruistic needs also play a part in motivating the future doctor.

Duffy et al (1964) concludes that:

> "Physicians are a heterogeneous group from the stand point of personality as well as of physical factors, they are all subject to stresses peculiar to the practice of medicine."

2.4.5.3 Consequences of Stress

The consequences of stress among GPs can be divided into:

A Individual
B Family

A. Individual Consequences of Stress

Murray (1977), undertook investigations into the first admissions and discharges of male doctors and other Social Class I males, from all Scottish mental hospitals and psychiatric units between the years 1963-1972. The figures were more than twice as high among male doctors than other Social Class I males. The discharge rates for drug dependency, alcoholism, affective disorders were all significantly higher among doctors than non doctors.

The first admission rates of alcoholism were 2.7 times higher among male doctors than Social Class I males, indicating that doctors are a high-risk group for alcoholism.

Similarly in the United Kingdom, Allibone et al (1981) estimated that there may be as many as 3 000 GPs who are alcoholics and that many may show other signs of stress. They also found a high incidence of self treatment and inadequate follow up of chronic diseases.

Bittker (1976) found that many of the characteristics contributing to a doctors success may actually become risk factors for depression. Self-sacrifice, competitiveness, perseverance and ambition are driving forces in the doctors life. The doctors own `needs´ are suppressed at the expense of their patients, which leaves them little opportunity for cultivation of recreational skills or relationship with family or friends. Depression may be precipitated by a significant loss and coping with the use of drugs or alcohol can impair the doctors ability to work. Suicide is also higher as a result.

Rose and Rosow (1973) reviewed Death Certificates in California from 1959 to 1961. They found that doctors and health care workers as a group, were twice as likely to commit suicide as the general population. Steppacher and Mausner (1974) studied the frequency of suicide among doctors in the United States over the period March 1965 to August 1970. The rate in male doctors was approximately 1.15 times higher than that of the over all male population. Female doctors compared badly as the rate was 3 times that expected on the basis of the population values. Richings et al (1986) studied 55 cases of suicide in England and Wales by doctors under the age of 40 between the years 1972, 1975, 1979, 1980 and 1982.

They reported that 10 doctors had been working as GPs, 3 had worked in universities, 27 had been employed in hospital services, one had worked in community health services and the employment of 14 was unknown.

In recent years the use of dependency producing drugs by doctors has increased. Modlin and Montes (1964) estimated that drug abuse among United States doctors varies from 30 to 100 times that in the general population as a consequence of their occupation. Vaillant et al (1970) noted in a 20 year period that a group of 45 doctors took more sedatives, stimulants and tranquillises than 90 matched controls. They suggest that the availability of the drugs is not sufficient to explain the high intake, but that overwork is a common explanation.

Doll and Peto (1977) in their study of doctors smoking habits and death from the period 1951 to 1971, showed that GPs smoked 37% more than hospital doctors and surgeons and the overall death rates among GPs were 23% higher than surgeons and hospital doctors of similar ages. Smoking-related diseases such as lung cancer, chronic bronchitis and ischemic and pulmonary heart disease accounted for 38% of these deaths.

Taking into account the above studies, it is clear that the nature of the work of GPs differs from other medical doctors in relation to stress and strain of general practice.

B. Family Consequences of Stress

Taylor et al (1983 p. 18) indicates that the medical family has 5 well defined stages, as determined by professional activities each with its own potential problems and developmental tasks.

a. Medical Training Years

Medical student marriages indicate a high level of tolerance, satisfaction and shared hardships. The support by the partner in emotional and financial terms dominate until the end of medical school. The internship creates considerable stress for the spouse. The spouse faces periods of loneliness, isolation and domestic problems owing to periods of long working hours of the doctor.

b. Beginning Practice

The medical family believes the worst is over but the beginning of practice ushers in the conflict of time for patients and family. Compulsive work habits already established in early medical training years is reinforced in this period. The doctor's children and spouse increasingly feel isolated from their workaholic parent/spouse. The spouse has to take on the role of father/husband or mother/wife as well as their own mother/wife or father/husband role, resulting in exhaustion by the dual responsibility (Gray 1982).

Stresses at this stage include child rearing and the purchase of a home. Doctors interest in the home and family activities is placed in competition with patients.

c. Maximum Career Demands

The intense demands on the doctor's time and energy means neglect of family obligations. Activities such as birthdays, school social events and sporting events are missed.

Doctors spouses feel neglected and angry when trying to compete with sick and dying patients. The telephone and the bleeper is a constant reminder of this neglect (Nelson 1981).

Evans (1965) in a review of 50 wives of doctors found that the onset of psychiatric illnesses were precipitated at the time when their doctor husbands became over involved in their practices.

The increased time spent away from home by the doctor is compensated for by enhanced standard of living for the family (Taylor et al 1983 p.9). The demands of the career leads to denial of these problems and subsequently family dysfunctions. Divorce and self-destructive behaviour such as the abuse of substances with depression and suicide was the end result.

d. Career Plateau

Doctors at this stage reach their peak ability as life is now determined by physical ageing and emotional exhaustion. Some doctors will be satisfied with their achievements while others will reflect an inability to reach their desired goal. Positive changes may be undertaken to maximize family interactions. Life events in the form of family illnesses or a son or daughter leaving home may force the doctor to re-examine his life (Taylor 1983 p.20).

e. Retirement

To relinquish power and control is difficult to accept, as the doctor still feels his knowledge and skill need to be passed on. Gaitz (1977) finds that

the high value on work placed by doctors with little time for recreation activities is a 'Bitter Pill' to contend with. This altered status of retirement is seen as a form of depression.

Support for the medical family depends on 3 sources:

1. Extended family members

2. Community

3. Medical Profession

The support is provided in both ongoing and crisis situations (Taylor et al 1983 p.22).

Nelson (1981) a family practitioner, concludes about the stress and strain of doctors and their families that needs changing:

> "We can start by striving to live a balanced life. We can perform a life of service to others, but tempered by compassion for ourselves. A balanced life includes attention to love and play and to our own health needs, as well as attention to our patients and our work. We can use our compulsiveness constructively to achieve whatever we want or need. We can build a good family support system to include more open sharing of ourselves as real people. We can use our history - taking skills to listen to our loved ones. We can give time and attention to ourselves and our families, while at the same time showing our patients how to live a well balanced life - by scheduling and explaining our own needs for the time away from our medical work. The same talent of detachment from family

when listening to patients can be used to detach from patients when it is time for family. We can use our money to expose our children to the world, to the excitement of new places, people, activities, ideas; thus teaching them flexibility in a rapidly changing world. We can teach them to be comfortable with themselves, whoever, whatever and whenever they are, by revealing our own humanity.

We can teach our children by our acceptance of ourselves with our own traits, whatever they may be - perfectionism, compulsiveness, dependency needs, weakness and all. We can use our own capacity for affection and understanding for our patients, for our families and for ourselves. For only by loving ourselves well can we help our children to develop into the loving, confident, productive and beautiful human being they were born to be."

CHAPTER 3

PATIENTS AND METHODS

The GPs were informed by letter regarding the nature of the research and their participation was requested (see Appendix A).

The research design of the investigation involved the analysis of questionnaire responses of IGPs in the Greater Durban Area.

3.1 Sample

An attempt was made to sample the total population (300) of IGPs in the Greater Durban Area included in the 'Representative and Marketing Information System of 1990.'

3.2 Instruments Used

3.2.1 Demographic Inventory

The demographic inventory was constructed to elicit information pertaining to personal and job factors. Data was obtained on the following characteristics:

Name
Age
Sex
Area of Practice
Practice Code
Marital Status
Number of Children

Ages of Children
Qualifications
Number of Years in Practice
Type of Practice
(see Appendix B)

3.2.2 Stress of Practice Questionnaire

The stress of practice questionnaire for IGPs was constructed by the investigator after interviews and discussions with IGPs in the Durban area. A pilot survey of 10 IGPs in the Greater Durban Area was conducted to test this questionnaire.

3.2.2.1 Scoring

The final questionnaire consisted of 27 items accompanied by a 4 point rating scale ranging from no stress at all (rating 4 or never) to a source of severe stress (rating 1 or often). The lower scores were taken to indicate high stress of practice (see Appendix C).

3.2.3 Maslach Burnout Inventory (MBI)

The burnout inventory used by the investigator was the MBI which was developed by Maslach and Jackson (1981 b). To minimize the reactive effects of such personal beliefs or expectations, it is important that respondents be unaware that the MBI is a burnout measure and that they not be sensitized to the general issues of burnout. For this reason, the questionnaire is labelled Human Service Survey rather than Maslach Burnout Inventory. The MBI was designed to assess the three components of burnout syndrome (i.e. emotional exhaustion, depersonalization and personal accomplishment). On these 3 aspects, 2 dimensions were measured, that of frequency (how often people have these feelings) and intensity (the strength of the feelings) (see Appendix D).

Burnout is also conceptualized as a continuous variable ranging from low to moderate to high degree of feelings. Therefore, it is not either present or absent.

3.2.3.1 Scoring

Scores on each subscale and on the dimension of intensity and frequency were considered separately. Six scores were computed for each GP who responded. A high degree of burnout was reflected in high scores on emotional exhaustion frequency and intensity subscale and depersonalization frequency and intensity scales, with low scores on personal accomplishment intensity and frequency subscales. A moderate degree of burnout was reflected in moderate scores on all three subscales. A low degree of burnout was reflected in low scores on emotional exhaustion and depersonalization subscales and high scores on personal accomplishment subscale.

3.3 Method of Administration

Questionnaires were sent out by post on the first of March 1991 and a return period of one month was allowed. This was followed up by a telephone call and a further letter including the questionnaire. The return of the second questionnaire was extended up to the end of April 1991.

A total of 120 questionnaires were returned, of which 106 were complete for statistical analysis. 14 Questionnaires were excluded as 10 had incomplete sections and 4 arrived beyond the time period. The response rate was 40% which compares favourably with similar occupational stress studies (Cooper et al 1989).

CHAPTER 4

RESULTS

4.1 Demographic Inventory Analysis

TABLE II

DEMOGRAPHIC CHARACTERISTICS OF 106 GPs

CHARACTERISTICS	NUMBER	PERCENTAGE
SEX		
MALE	96	90.6
FEMALE	10	9.4
AGES		
20 - 30	7	6.6
31 - 40	46	43.4
41 - 50	34	32.1
51 - 60	16	15.1
60 - Over	3	2.8
MARITAL STATUS		
Married	100	94.3
Single	5	4.7
Widower	1	0.9
NUMBER OF CHILDREN		
0	9	8.5
1	6	5.7
2	35	33.0
3	41	38.7
4	12	11.3
5	3	2.8
QUALIFICATIONS		
Basic Medical Degree	97	91.5
Medical Degree & Post Graduate Degree/Diploma in General Practice	6	5.7
Medical Degree & Post Graduate Degree/Diploma (Other)	3	2.8
YEAR IN PRACTICE		
1 - 5	15	14.2
6 - 10	40	37.7
11 - 15	19	17.9
16 - 20	16	15.1
21 - 25	7	6.6
26 - 30	6	5.7
31 - 35	3	2.8
AREA OF PRACTICE		
Durban Central	10	9.4
Sydenham, Overport, Asherville, Springfield	19	17.9
Clare Estate, Parlock, Inanda, Reservior Hills, Red Hill, Newlands	11	10.4
New Germany, Pinetown, Mariannhill	6	5.7
Shallcross, Wentworth, Umhlatuzana, Mobeni, Merebank, Clairwood,	13	12.3
Isipingo, Isipingo Rail	8	7.5
Chatsworth	17	16.0
Phoenix	17	16.0
Verulam	5	4.7

4.2 Stress of Practice

The Stress of Practice Questionnaire consisted of 27 items as potential sources of stress for GPs (see Appendix C).

Factor Analysis with Varimax Rotation was carried out on the 27 items. Items were grouped statistically into 6 factors.

TABLE III

FACTOR ANALYSIS OF THE STRESS OF PRACTICE

FACTOR 1	DEMANDS OF THE JOB
24	I feel uncomfortable when I am unable to find solutions for a chronic complaining patient
32	I fear making errors in practice
29	I feel frustrated in making a diagnosis when symptoms are vague
27	I do not feel free to express fear and anxieties openly to a colleague
23	I do not get enough time with patients
26	I find it difficult to break news to families about dying members
FACTOR 2	WORK: HOME INTERFACE & SOCIAL LIFE
15	My family complains that I spend too little of my time with them
16	My family gets frustrated when my work spills over into half days and holidays
14	I cannot take sufficient time off from work because it is detrimental to my patients
13	I don't get enough time from work for leisure activities
20	My family gets annoyed by the telephone consultations and emergency calls
17	I over work myself to keep up with commitments
18	I cannot say no when patients want me to see them
FACTOR 3	PATIENT'S EXPECTATIONS
36	Do you get angry or upset when patients ask for certificates which are not medically warranted
33	I feel frustrated when medical aid schemes don't pay my accounts properly
31	Do you become annoyed when patients insist on medication which you do not feel necessary
34	I get annoyed when patients don't comply with medication
38	I get frustrated when patients expect to get better in a short time
FACTOR 4	WORKLOAD
37	I get annoyed when I have to leave my practice to locums
21	I feel overburdened by demands made of me by my patients
35	I don't get sufficient time to read medical journals
22	I fear losing a patient if I do not satisfy his/her needs
19	I get called out on home visits for trivial reasons
FACTOR 5	ROLE CONFLICTS
30	I feel angry when I have to pay provisional taxes on money I have not earned
28	I cannot discuss my work with my family because of confidentiality
FACTOR 6	EMOTIONAL INVOLVEMENT
12	I feel the fees are low for the work I do
25	I feel uncomfortable when caring for friends, family members or other physicians

TABLE IV

MEAN SCORES FOR THE DIMENSION OF STRESS IN PRACTICE (IN ORDER OF IMPORTANCE) FOR 106 GPs

DIMENSION OF STRESS IN PRACTICE	MEAN SCORES (STANDARD DEVIATIONS)
Stress 1 Demands of the Job	14.84 (3.79)
Stress 2 Work: Home Interface and Social Life	12.99 (4.18)
Stress 4 Workload	11.16 (3.20)
Stress 3 Patient's Expectations	8.07 (2.41)
Stress 5 Role Conflicts	3.80 (1.71)
Stress 6 Emotional Involvement	3.75 (1.71)

4.3 Maslach Burnout Inventory

The frequency and intensity of 22 burnout scores for this sample of GPs were placed in the 3 categories, emotional exhaustion, depersonalization and personal accomplishment as proposed by Maslach and Jackson (1981b) as follows:

TABLE V

CATEGORIZATION OF MBI SCORES (Maslach & Jackson, 1981b p.2)

MBI SUBSCALE	RANGE (%)		
	LOW (Lower Third)	MODERATE (Middle Third)	HIGH (Upper Third)
EMOTIONAL EXHAUSTION			
Frequency	≤ 17	18 - 29	≥ 30
Intensity	≤ 25	26 - 39	≥ 40
DEPERSONALIZATION			
Frequency	≤ 5	6 - 11	≥ 12
Intensity	≤ 6	7 - 14	≥ 15
PERSONAL ACCOMPLISHMENT			
Frequency	≥ 40	39 - 34	≤ 33
Intensity	≥ 44	43 - 37	≤ 36

Note: Occupations represented in the scale development and MBI normative samples in Table V consisted of:

845 Social Security Administration employees,
142 police officers,
231 nurses,
125 agency administrators,
222 teachers,
97 counsellors,
91 social workers,
68 probation officers,
63 mental health workers,
86 physicians,
40 psychologists and psychiatrists,
31 attorneys and
77 others.

TABLE VI

FREQUENCY DISTRIBUTION OF MBI SCORES FOR 106 GPs

MBI SUBSCALE	RANGE (%)		
	LOW	MODERATE	HIGH
EMOTIONAL EXHAUSTION			
Frequency	50	34.9	15.1
Intensity	62	32.1	5.7
DEPERSONALIZATION			
Frequency	72.6	23.6	3.8
Intensity	65.1	25.5	9.4
PERSONAL ACCOMPLISHMENT			
Frequency	25.5	29.2	45.3
Intensity	27.4	19.8	52.8

Original numerical scores as in Table V were used to determine the cut off points in this research. The results in this research study depicted in Table VI show that 45 - 52% of the sample experienced a high degree of personal accomplishment whereas 65 - 72% experienced low degree of depersonalization. Low levels of intensity and frequency of emotional exhaustion were experienced by 50 - 62% of the sample.

4.3.1 Comparison of Means and Standard Deviations for the MBI Subscales

The Degree of Burnout experienced by this sample of IGPs was compared to normative data collected by Maslach and Jackson (1981b) Table VII

TABLE VII

COMPARISON OF MEANS AND STANDARD DEVIATIONS (SD)
for the MBI SUBSCALES

DIMENSIONS	EMOTIONAL EXHAUSTION		DEPERSONALIZATION		PERSONAL ACCOMPLISHMENTS	
	NORMATIVE DATA	SAMPLE	NORMATIVE DATA	SAMPLE	NORMATIVE DATA	SAMPLE
FREQUENCY						
Mean	24.08	18.42	9.40	4.05	36.01	33.87
SD	11.88	10.94	6.90	3.77	6.93	7.96
INTENSITY						
Mean	31.68	21.46	11.71	5.77	39.70	36.64
SD	13.84	12.38	8.09	5.69	7.68	9.41

The results depict sample means slightly lower than those of the normative data except for intensity of emotional exhaustion and intensity and frequency of depersonalization were significantly lower than the normative means.

4.3.2 Means and Standard Deviations of Scores on Demographic Variables

4.3.2.1 Comparison of Data on Sex, Age and Marital Status to Normative Data

The Means and Standard Deviations of scores on the six MBI Subscales on three of the Demographic variables, of sex, age and marital status were compared to normative data as suggested by Maslach and Jackson (1981b) Table VIII and IX.

TABLE VIII

COMPARISON OF SAMPLE SCORES TO DEMOGRAPHIC NORMS FOR THE MBI SUBSCALE (FREQUENCY DIMENSION)

VARIABLES	EMOTIONAL EXHAUSTION				DEPERSONALIZATION				PERSONAL ACCOMPLISHMENT			
	NORMS		SAMPLE		NORMS		SAMPLE		NORMS		SAMPLE	
	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD
SEX												
Male	23.08	11.92	18.40	10.94	10.43	7.09	4.16	3.86	35.65	7.21	34.27	7.74
Female	24.48	11.83	18.60	11.51	8.94	6.77	3.00	2.79	36.18	6.82	30.00	9.49
AGE												
20 - 30	25.37	11.83	19.57	7.37	10.63	7.17	4.29	2.69	34.94	6.74	35.57	10.16
31 - 40	24.58	11.62	20.57	10.77	9.60	6.72	4.57	4.54	36.27	6.95	34.89	7.97
41 - 50	21.85	11.51	16.85	9.27	7.32	5.85	3.56	2.85	37.05	7.18	32.62	7.42
51 and over	21.08	12.13	15.58	14.38	7.07	6.24	3.58	3.56	37.87	6.70	33.00	8.25
MARITAL STATUS												
Single	26.34	11.83	21.80	5.54	10.98	6.90	4.40	3.21	33.94	7.15	34.20	5.45
Married	22.94	11.62	18.13	11.12	8.91	6.67	3.99	3.81	36.71	6.73	33.83	8.12
Widowed	22.72	13.04	30.00	-	7.45	6.61	8.00	-	38.76	6.01	36.00	-

TABLE IX

COMPARISON OF SAMPLE SCORES TO DEMOGRAPHIC NORMS FOR THE MBI SUBSCALE

(INTENSITY DIMENSION)

VARIABLES	EMOTIONAL EXHAUSTION				DEPERSONALIZATION				PERSONAL ACCOMPLISHMENT			
	NORMS		SAMPLE		NORMS		SAMPLE		NORMS		SAMPLE	
	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD
SEX												
Male	28.99	13.80	21.07	12.54	12.68	8.01	5.91	5.67	39.55	8.01	37.11	9.20
Female	33.33	13.62	25.20	10.56	11.10	8.10	4.50	6.00	39.82	7.46	32.10	10.75
AGE												
20 - 30	33.39	13.64	19.71	6.85	13.16	8.19	4.14	2.19	38.96	7.39	37.14	13.68
31 - 40	32.40	13.48	24.17	11.53	12.30	8.02	6.78	6.97	40.16	7.71	37.33	9.45
41 - 50	28.79	13.42	19.50	11.39	9.32	7.44	5.09	4.65	40.54	8.21	36.18	8.33
51 and over	27.84	14.52	19.05	16.59	8.33	7.03	5.16	4.63	40.12	7.75	35.63	10.07
MARITAL STATUS												
Single	34.50	13.61	22.40	6.50	12.71	8.44	4.60	2.70	38.63	7.75	35.80	7.01
Married	30.20	13.72	21.31	12.64	11.49	7.91	5.80	5.82	40.04	7.55	36.61	9.56
Widowed	30.88	14.46	32.00	-	10.19	7.90	9.00	-	40.19	7.68	44.00	-

4.3.2.2 Means and Standard Deviations of Scores on Remaining Demographic Variables

No comparative demographic norms were available for the variables, qualifications and the length of years in practice. However various trends did emerge. (Table X)

TABLE X

MEANS AND STANDARD DEVIATIONS OF MBI SUBSCALE SCORES
ON THE REMAINING DEMOGRAPHIC VARIABLES

VARIABLES	EMOTIONAL EXHAUSTION				DEPERSONALIZATION				PERSONAL ACCOMPLISHMENT			
	INTENSITY		FREQUENCY		INTENSITY		FREQUENCY		INTENSITY		FREQUENCY	
	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD
QUALIFICATIONS												
Basic Degree	21.08	12.00	18.20	10.81	5.65	5.65	3.99	3.87	36.27	9.67	40.67	4.66
Basic + PG Deg*	25.56	16.26	20.78	12.70	7.11	6.27	4.67	2.60	33.67	8.10	36.00	6.28
LENGTH OF YEARS IN PRACTICE												
0 - 5 (15)	19.33	11.26	16.93	10.05	4.60	3.46	3.87	3.09	36.60	11.42	33.80	9.17
6 - 10 (40)	24.10	11.31	21.32	10.37	7.22	7.08	4.95	4.50	37.78	9.24	35.67	7.65
11 - 20 (35)	21.06	11.54	16.91	9.48	5.23	5.09	3.20	2.98	36.94	8.24	33.46	7.15
21 - 30 (13)	20.00	17.55	17.85	15.60	4.92	4.35	4.31	3.97	33.38	8.20	30.54	7.47
31 - 45 (3)	8.00	9.85	7.00	8.19	2.33	2.52	1.67	1.53	32.33	19.86	29.33	15.04

* NB: PG Deg = Postgraduate Degree

4.4 Comparison of Burnout Inventory with Six Stress Factors of Practice

Pearson´s Correlation Coefficients were calculated for the six MBI Subscales and the six Stress Factors (Table XI)

TABLE XI

PEARSON'S CORRELATION (τ) COEFFICIENTS FOR RELATIONSHIPS BETWEEN STRESS FACTORS AND BURNOUT SUBSCALES

STRESS FACTORS	BURNOUT SUBSCALES					
	EMOTIONAL EXHAUSTION		DEPERSONALIZATION		PERSONAL ACCOMPLISHMENT	
	FREQUENCY	INTENSITY	FREQUENCY	INTENSITY	FREQUENCY	INTENSITY
STRESS 1	- 0.404	- 0.412	- 0.214	- 0.166	0.133	0.171
STRESS 2	- 0.517	- 0.451	- 0.218	- 0.176	0.043	0.054
STRESS 3	- 0.399	- 0.400	- 0.285	- 0.252	0.112	0.053
STRESS 4	- 0.373	- 0.453	- 0.256	- 0.245	0.0441	0.034
STRESS 5	- 0.195	- 0.211	- 0.888	- 0.075	- 0.162	- 0.141
STRESS 6	- 0.199	- 0.219	- 0.184	- 0.139	0.162	0.046

4.5 Stepwise Multiple Regression for the six MBI Subscale Scores and six Stress Factors.

Stepwise Multiple Regression with forward selection was used to analyze the relationship between the six MBI Subscale scores and the six Stress Factors calculated from the factor analysis. This method is used to achieve the best linear prediction between the dependent and independent variables. (Table XII)

Mallows Cp criterium for model selection (i.e. the best subset) is given by the smallest Cp Value.

Partial R^2 were used as indicators of relative importance of the various Xi's in determining the Value of Y.

In a stepwise procedure, the cut-off point is determined by 2 criteria:

1. Overall F-Ratio is significant

2. The partial regression coefficient for the individual independent variables being added must be statistically significant or approaching significance. Below this point the amount of variance contributed by each additional variable R^2 change is very small.

TABLE XII

MULTIPLE REGRESSION ANALYSIS OF SIX STRESS FACTORS AGAINST THE SIX MBI SUBSCALES

DEPENDENT VARIABLE EMOTIONAL EXHAUSTION (INTENSITY)					
INDEPENDENT VARIABLE	PARAMETER ESTIMATE	PARTIAL R^2	MODEL R^2	Cp	P-Value
STRESS 4	-0.703	0.2050	0.2050	13.2260	0.0001
STRESS 3	-0.892	0.0566	0.2616	7.0203	0.0059
STRESS 2	-0.648	0.0376	0.2992	3.5666	0.0212
STRESS 1	-0.521	0.0174	0.3166	3.0472	0.1121
DEPENDENT VARIABLE EMOTIONAL EXHAUSTION (FREQUENCY)					
INDEPENDENT VARIABLE	PARAMETER ESTIMATE	PARTIAL R^2	MODEL R^2	Cp	P-Value
STRESS 2	-1.000	0.2669	0.2669	7.7970	0.0001
STRESS 3	-0.829	0.0512	0.3182	2.1214	0.0064
STRESS 1	-0.481	0.0203	0.3384	1.0842	0.0800
DEPENDENT VARIABLE DEPERSONALIZATION (INTENSITY)					
INDEPENDENT VARIABLE	PARAMETER ESTIMATE	PARTIAL R^2	MODEL R^2	Cp	P-Value
STRESS 3	-0.430	0.0634	0.0634	-0.2288	0.0092
STRESS 4	-0.305	0.0245	0.0879	-0.8958	0.0990
DEPENDENT VARIABLE DEPERSONALIZATION (FREQUENCY)					
INDEPENDENT VARIABLE	PARAMETER ESTIMATE	PARTIAL R^2	MODEL R^2	Cp	P-Value
STRESS 3	-0.339	0.0816	0.0816	0.5096	0.0030
STRESS 4	-0.197	0.0236	0.1052	-0.1215	0.1026
DEPENDENT VARIABLE PERSONAL ACCOMPLISHMENT (FREQUENCY)					
INDEPENDENT VARIABLE	PARAMETER ESTIMATE	PARTIAL R^2	MODEL R^2	Cp	P-Value
STRESS 5	-1.161	0.0264	0.0264	4.0260	0.0964
STRESS 1	0.351	0.0403	0.0667	1.6357	0.0373
STRESS 6	1.061	0.0215	0.0882	1.2936	0.1240
DEPENDENT VARIABLE PERSONAL ACCOMPLISHMENT (INTENSITY)					
INDEPENDENT VARIABLE	PARAMETER ESTIMATE	PARTIAL R^2	MODEL R^2	Cp	P-Value
STRESS 1	0.617	0.0295	0.0295	2.2374	0.0785
STRESS 5	-1.240	0.0451	0.0746	-0.6077	0.0272

4.6 Analysis of Variance (ANOVAS)

ANOVAS were used to compare difference between sexes, age groups and marital status with relation to MBI. No significant differences were found between the mean MBI scores for these groups.

CHAPTER 5

DISCUSSION OF RESULTS

5.1 DEMOGRAPHIC INVENTORY CHARACTERISTICS

The sample comprised 96 (90.6%) male doctors and 10 (9.4%) female doctors; 7 (6.6%) were aged 20-30, 46 (43.4%) aged 31-40, 34 (32.1%) aged 41-50, 16 (15.1%) aged 51-60 and 3 (2.8%) over 60. A total of 100 (94.3%) doctors were married, 5 (4.7%) single and 1 (0.9%) was a widower. 97 (91.5%) GPs practiced with the basic medical degree while 6 (5.7%) with post graduate degree/diploma in general practice and 3 (2.8%) with post graduate degree/ diploma other than in general practice.

15 (14.2%) GPs were in practice for 1-5 years, 40 (37.7%) for 6-10 years, 19 (17.9%) for 11-15 years, 16 (15.1%) for 16-20 years, 7 (6.6%) 21-28 years 6 (5.7%) for 26-30 years and 3 (2.8%) for 31-35 years. The distribution of GPs was concentrated mainly in areas inhabited by the Indian population.

5.2 STRESS OF PRACTICE

The intrinsic items associated with the stress of practice were grouped into six factors. The mean and standard deviation for each of these factors are given in Table III, p58. Factor 1 (Demands of the Job), Factor 2 (Work; Home Interface and Social Life) and Factor 4 (Workload) were considered most stressful in this study.

The demands on GPs are intense with limited time. 'Time Pressures' (MacKichan 1972, p2) is a potential source of stress that overflows from the work situation into family life.

The stress of being on call all the time leaves little time for leisure activities and recuperation. The workload is aggravated by unnecessary home visits and demands and interferes with family life (Gray 1982).

In a study by Cooper et al (1989) among GPs in England four factors were negatively predictive of high levels of job satisfaction among GPs. These factors were the demands of the job and patient's expectations, work: home interface and social life, interruptions and practice administration. Although the content of the factors were different, some of the factors were also identified in the present study.

Makin et al (1988) in a study of GPs in the Greater Manchester area also identified Factor 1 and Factor 2 in the present study as most stressful.

5.3 BURNOUT ANALYSIS

The burnout among IGPs presented in Table VI showed the following:

1. 45-52% of the sample experienced a high degree of personal accomplishment in the dimension of frequency and intensity, while 19-29% moderate and 25-27% low degree.

2. 65-72% of the sample experienced a low degree of depersonalization in the dimensions of frequency and intensity, while 23-25% moderate and 3-9% high degree.

3. 50-62% of the sample experienced a low degree of emotional exhaustion in the dimension of frequency and intensity, while 32-34% moderate and 5-15% high degree.

As suggested by Maslach and Jackson (1981b), burnout is conceptualized as a continuous variable. The scores reflect that 50% experienced a high degree of personal accomplishment. Indicating feelings of competence with people and achievement in their careers.

More than 65% experienced the ability to relate to their patients in a humanized way. More than 50% experienced a low degree of emotional exhaustion suggesting that these practitioners could recuperate from the stress of the job.

When comparing the Mean and Standard Deviations of all the MBI Subscales for IGPs against the Normative Data of Maslach and Jackson (1981b), all scores for the dimensions of frequency and intensity were lower for the sample population of IGPs (Table VII).

5.3.1 Demographic Variables

5.3.1.1 Sex

When comparing male and female doctors of all ages with Normative Data, there were no differences. However Maslach and Jackson (1981) found differences in each of MBI Subscales, females scored higher than males on Emotional Exhaustion both for Intensity and Frequency. Males scored higher than females on Personal Accomplishment, both for Intensity and Frequency. Males scored higher than females on Depersonalization both for Frequency and Intensity.

5.3.1.2 Age

In terms of age the scores obtained for all MBI Subscales for the group between 20 to 50 were lower than Normative Data. The scores were even lower with advancing age. The results in the younger age group were lower than expected for the Normative Data. This is a contrast as higher scores are expected in the first few years (Maslach and Jackson (1981).

5.3.1.3 Marital Status

Single doctors in the study did not show any significant differences when compared with married doctors. Maslach and Jackson (1981) reported that single and divorced doctors scored higher than married individuals on Emotional Exhaustion for the dimensions of Frequency and Intensity. Social support may be an alleviating factor. No comment could be made on widowers as only one was among the sample.

5.3.2 Other Variables

No significant difference were found between doctors who practiced with the basic medical degree and those with a post graduate degree, although the number was small. Difference by levels of education were found for MBI Subscales, especially with people who had done postgraduate work (Maslach and Jackson 1981). Those with post-graduate work scored higher on Emotional Exhaustion was not shown by this study. Doctors with number of years in practice scored lower on the burnout scale which compares with (Maslach and Jackson (1981).

5.4 COMPARISON OF BURNOUT INVENTORY AND STRESS FACTORS

5.4.1 Correlation Coefficient

Correlation of Stress factors and Burnout Subscales were weak. (Table XI).

5.4.2 Multiple Regression Analysis

5.4.2.1 Emotional Exhaustion - Intensity

The stress factors shown to be statistically significant in the multiple regression analysis were factors 4, 3, 2 and 1 as indicated by the P values in the Table XII.

Stress factor 4 contributed to 20-25% of the variation explained by the model. In addition stress factor 3 contributed 5.7% of the variation. Stress factor 2 contributed 3.8%, while stress factor 1 contributed 1.7% of the variation.

In total 31.7% of the variation in Emotional Exhaustion (Intensity) was explained by factors 4, 3, 2 and 1. Thus 68.3% of the variation was due to factors not measured in the study.

5.4.2.2 Emotional Exhaustion - Frequency

The statistically significant factors were 2, 3 and 1, with stress factor 2 as the most important one contributing to 26.7% of the variation in Emotional Exhaustion - Frequency. Stress factor 3 contributed to 5.1% of the variation and stress factor 1 to 2% of the variation. In total the 3 factors contributed to 33.8% of the variation. Thus 66.2% of the variation was due to factors not measured by the study.

5.4.2.3 Depersonalization - Intensity

The statistically significant factors were 3 and 4, with stress factor 3 contributing to 6.3% of the variation in Depersonalization - Intensity. Stress factor 4 contributed to only 2.4% of the variation. In total the 2 factors contributed to 8.7% of the variation. Thus 91.3% of the variation was due to factors not explained by the study.

5.4.2.4 Depersonalization - Frequency

The statistically significant factors were 3 and 4, with stress factor 3 contributing to 8.1% of the variation in Depersonalization - Frequency. Stress factor 4 contributed to only 2.4% of the variation. In total the 2 factors contributed to 10.5% of the variation. 89.5% of the variation was due to factors not explained by the study.

5.4.2.5 Personal Accomplishment (Frequency)

The statistically significant factors were 5, 1 and 6, with stress factor 5 contributing to 2.6% of the variation in Personal Accomplishment (Frequency). Stress factor 1 contributed to 6.6% while stress factor 6 contributed to 2.2% of the variation. In total the 3 factors contributed to 8.8% of the variation. 91.2% of the variation was due to factors not measured by the study.

5.4.2.6 Personal Accomplishment (Intensity)

The statistically significant factors were 1 and 5, with stress factor 1 contributing to 2.9% of the variation in Personal Accomplishment (Intensity). Stress factor 5 contributed to 4.5% of the variation. In total the 2 factors contributed to 7.4% of the variation. 92.6% of the variation was due to factors not explained by the study.

5.4.2.7 Burnout - Subscales (Overview)

For Emotional Exhaustion (Intensity and Frequency) a fair amount of variation was explained by some of the stress factors but the relationships were not strong. In this study the stress level was not a good indicator for the Burnout Inventory. A low to moderate degree of burnout experienced by IGPs may be explained by other factors not measured by the study.

CHAPTER 6

CONCLUSION

In this group of Indian General Practitioners in the Greater Durban Area, the following hypotheses were stipulated:

1. Stress factors and burnout are high among IGPs.

2. Stress factors correlate with burnout.

The following short comings emerged from the study:

1. This was a mail questionnaire and the sample was 'Self Selected' - possibly introducing bias.

2. The questionnaire on Burnout has to be filled in privately, but response could be influenced by others.

3. Personality variables were not measured by this study as it is related to burnout.

4. Social support systems, according to Carroll and White (1982) interact with the individual.

5. Cultural dimension - has not been widely investigated.

6. The type of work undertaken by the general practitioner is important but has not been studied extensively.

The following research possibilities emanate from this study:

1. A study with similar design as the present study with a larger sample from other urban areas would help to make more conclusive the effects of different stress factors on burnout.

2. A study with similar design could be conducted among other ethnic group of general practitioners in urban areas in order to make local cross-cultural comparisons.

3. A study with similar design could be conducted among rural and urban general practitioners. This could offer different stress factors and their effects on burnout.

4. A study with similar design could also include personality profiles, substance abuse and mental health.

Therapeutically it is evident that:

1. The stress of practice among general practitioners is important.

2. Burnout among this group of Indian General Practitioners was not a problem. The possibility exists that non-occupational variables such as home life, culture, community and so on could buffer the pathway to burnout.

Stress in society has a multifactorial aetiology and is increasing in this population. The decline in clinical authority and the increasing demands on general practitioners against limited time interrupts family and social life. Although the current research did not bear out a link between stress and burnout among IGPs' future research should perhaps investigate possible mechanisms that act as buffers in protecting the IGPs from burnout.

These buffer mechanisms could then be explored with regard to GPs of other cultures who experience high levels of stress leading to burnout. Providing General Practitioners with more time management, work organization skills, development and social management skills might help them to cope with these chronic stressors. Counselling service for General Practitioners who find themselves under psychological pressure of work may be of substantial benefit.

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APPENDIX A

35 Dunrobin Crescent
Asherville
DURBAN
4091

1 March 1991

Dear Colleague

I am a Psychiatric Registrar in training at the University of Natal, Medical School, Durban. I propose to undertake research into the causes of stress among Indian General Practitioners in the greater Durban area, and would appreciate your assistance.

I am aware that it is quite tiresome to fill in questionnaires. However, your participation is vital to the success of the research.

Certain personal particulars are necessary but I assure you that all the information will be strictly confidential. A self-addressed envelope is enclosed so that the completed questionnaire can be returned through the post.

I thank you for the courtesy of your assistance.

Yours sincerely

DR A.S. KATHRADA
LLM LRCP LLM LRCS

APPENDIX B

QUESTIONNAIRE

Stress among Indian General Practitioners

Please complete the following questionnaire as accurately as possible. Where indicated mark the appropriate square with a tick (√)

Section A: General

For Official Use Only

1. Name of Practitioner: _____ ID ☐☐☐

2. Practice code Number: _____

3. Area of Practice: _____ ☐☐

4. Sex: Male ☐ Female ☐ ☐

5. Age: 20 - 30 ☐

31 - 40 ☐

41 - 50 ☐ ☐

51 - 60 ☐

Over 60 ☐

6. Marital Status: Married ☐

Single ☐ ☐

Widowed ☐

Divorced/Separated ☐

7. Number of Children: ☐ ☐☐

8. Ages of Children:

Under 5 years of age ☐

5 - 12 years of age ☐

13 - 22 years of age ☐

23 years and older ☐

9. Qualifications: ☐☐

10. Number of years in practice ☐☐

11. Nature of Practice:

Cash ☐ ☐

Mixed ☐

Medical Aid ☐

Other ☐

APPENDIX C

SECTION B: STRESS OF PRACTICE

Place a tick (✓) in the column that applies most closely to you.

	Often	A Few Times	Rarely	Never
12. I feel the fees are low for the work I do				
13. I don't get enough time from work for leisure activities				
14. I cannot take sufficient time off from work because it is detrimental to my patients				
15. My family complains that I spend too little of my time with them				
16. My family gets frustrated when my work spills over into half days and holidays				
17. I overwork myself to keep up with commitments				
18. I cannot say no when patients want me to see them				
19. I get called out on home visits for trivial reasons				
20. My family gets annoyed by the telephone consultations and emergency calls				
21. I feel overburdened by demands made of me by my patients				
22. I fear losing a patient if I do not satisfy his/her needs				
23. I do not get enough time with patients				
24. I feel uncomfortable when I am unable to find solutions for a chronic complaining patient				

Section B continued

	Often	A Few Times	Rarely	Never
25. I feel uncomfortable when caring for friends, family members or other physicians.				
26. I find it difficult to break news to families about dying members				
27. I do not feel free to express fear and anxieties openly to a colleague				
28. I cannot discuss my work with my family because of confidentiality				
29. I feel frustrated in making a diagnosis when symptoms are vague				
30. I feel angry when I have to pay provisional taxes on money I have not earned				
31. Do you become annoyed when patients insist on medication which you do not feel necessary				
32. I fear making errors in practice				
33. I feel frustrated when medical aid schemes don't pay my accounts properly				
34. I get annoyed when patients don't comply with medication				
35. I don't get sufficient time to read medical journals				
36. Do you get angry or upset when patients ask for certificates which are not medically warranted				
37. I get annoyed when I have to leave my practice to locums				
38. I get frustrated when patients expect to get better in a short time				

APPENDIX D

SECTION C: HUMAN SERVICES SURVEY (MASLACH BURNOUT INVENTORY)

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) in both the "HOW OFTEN" and "HOW STRONG" columns 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 described how frequently you feel that way. Then decide how strong the feeling is when you experience it by writing the number (from 1 to 7) that best describes how strongly you feel it. An example is shown below.

EXAMPLE:

HOW OFTEN	0 NEVER	1 A FEW TIMES A YEAR OR LESS	2 ONCE A MONTH OR LESS	3 A FEW TIMES A MONTH	4 ONCE A WEEK	5 A FEW TIMES A WEEK	6 EVERY DAY	
HOW STRONG	0 Never	1 Very Mild, Barely Noticeable	2	3	4 Moderate	5	6	7 Major Very Strong

STATEMENT	HOW OFTEN 0 - 6	HOW STRONG 0 - 7
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.		

...STATEMENTS continued

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.		