UNIVERSITY OF NATAL (DURBAN)

CENTRE FOR INDUSTRIAL, ORGANISATIONAL AND LABOUR STUDIES

INDUSTRIAL PSYCHOLOGY

A PRE- AND POSTTEST ANALYSIS OF STRESS LEVELS OF EMPLOYEES AT DURBAN METRO ELECTRICITY WHO ATTENDED A STRESS MANAGEMENT PROGRAMME
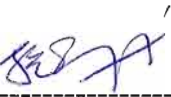
By:

JAMEELA VAYEJ

Supervisor: Ms Sonia Hill

Submitted in partial fulfilment of the requirements for the degree of
Master of Social Science in Industrial Psychology in the
Centre for Industrial, Organisational and Labour Studies,
University of Natal, Durban

2002

Declaration of Originality

I hereby declare that this dissertation is my original work unless otherwise stated in
the text. This dissertation has not been submitted for a degree at any other
university.

Jameela Vayej

April 2002

Table of Contents

List of Figures

List of Graphs

List of Tables

v

List of Abbreviations

ANS	-	Autonomic Nervous System
DME	-	Durban Metro Electricity
EAP	-	Employee Assistance Programme
GHQ	-	General Health Questionnaire
IDE	-	Individual Dignity Entitlement
PNS	-	Parasympathetic Nervous System
SIT	-	Stress Inoculation Training
SMP	-	Stress Management Programme
SNS	-	Sympathetic Nervous System
SPSS	-	Statistical Package for the Social Sciences
STAI	-	State Trait Anxiety Inventory

Abstract

This research study aims to establish the level of success of a particular stress management programme conducted at Durban Metro Electricity. The study explores the levels of stress experienced by employees before and after attending the stress management programme. This required a pre- and posttest analysis. In addition, a t-test was conducted to ascertain significant statistical or quantitative changes in stress levels. The study also explores qualitative data that reflect the perceived stressors that employees feel they face in the workplace.

Five different stressors emerged from the qualitative data: management problems, safety issues at work, staff attitude problems, stressful work tasks, and general job stress. The perceived symptoms of stress are physical, emotional and cognitive in nature.

The t-test yielded a fifty percent stress reduction result. Whilst this is commendable, it is important to look at further avenues for stress reduction.

It is recommended that a multidimensional approach to stress management be implemented in the organisation. It is maintained that it is not enough to train and equip employees with coping skills. Stress management within the organisation should include support systems and resources to help reduce stress. This refers to a system where managers, supervisors and staff come together to actively consider organisational structure, practice and dynamics so as to find creative solutions to reduce stress. The system should also include individual problem-focused stress counselling on a regular basis.

By implementing stress management strategies beyond a three-day stress management programme, and by encouraging co-operation of management and employees, Durban Metro Electricity can bring about further reductions in stress levels.

Chapter One

Introduction

1.0.   Introduction

In everyday life and in work situations people are subjected to a wide range of pressures. Pressure is the aggregate of all changes, challenges or demands placed upon individuals. It is the way individuals experience various situations. At work, pressure is commonly experienced through demands on time or attention. When placed under prolonged pressure, with constant stress responses, individuals gradually consume all their available energy and experience reduced working capacity (Oyen, 1998).

However, people do have a wide range of resources and strategies for coping with such pressures. Some may cope well at certain times and will not feel the pressure having any adverse effect upon them. Others may have difficulty in dealing with certain situations. This experience of difficulty may be termed stress.

Any situation that puts an individual under pressure is technically "stressful". Stress is not necessarily unpleasant or harmful. When individuals are able to cope well with the stress and find it to be positive in its effect, they tend to use other words - such as stimulation or challenge. This type of stress can be termed eustress. However, stress in the context of this study means the reaction individuals have to those pressures which are harmful, unpleasant or disabling (Tyrer, 1990; Lazarus in Williams, 1994). This type of stress may also be termed distress, but the writer will use the term stress in referring to this syndrome for the purposes of the present research.

Hence, it can be said that stress occurs when the pressures upon us exceed our resources to cope with those pressures, or :

"When a person's perception of a demand exceeds their perception of whether they can cope with the demand, they are overly stressed" (Dugmore, 1998: 82 - 83).

Therefore, we can attempt to tackle stress either by reducing the pressures or by increasing our coping resources, or by using a combination of both strategies.

This may sound simple. However, the problem is that different people find quite different situations and circumstances to be stressful. At the extremes, a situation which one person experiences as positive and stimulating will cause another person acute distress / stress.

Prolonged or acute exposure to excessive stress can lead to illnesses. Stress can be seen as one of the main causes of reduced productivity, social problems and ill health. Stress can also be seen as causing adverse pressures in social situations and at work. In line with this, Bisseker (1998) says that stress - related illness can be described as the main occupational disease in the modern workplace, resulting in economic costs of treatment, absenteeism, and lost productivity.

If organisations are to maximize the performance of employees, they need to understand what stress is. Stress is a reaction by the individual to pressure, both external and self-imposed, which results in physiological and psychological changes. Once pressure becomes excessive and the person is distressed, it results in costs to the individual and, ultimately, to the organisation. On the other hand, many jobs fail to offer employees enough pressure for them to achieve optimal performance.
In this situation, individuals become bored and apathetic or tense and frustrated - all signs of stress. More enlightened organisations are recognizing the need to monitor signs of excessive stress. With careful monitoring, good coping strategies and a balanced lifestyle, people can be helped to keep stress at acceptable levels and thereby ensure maximum performance (Cranwell-Ward, 1995).

Because of the far reaching nature of stress, which cuts across both work and non-work domains, the design of stress management interventions needs to be approached from a multidisciplinary perspective. The various sources and symptoms of workplace stress, require management to carefully devise responses to this problem area. The potential negative ramifications of stress for organisations and their employees are so substantial that it is crucial that managers act to aid their employees in the development of their coping skills and to reduce excessive stress in the workplace itself.

It is necessary, therefore, for organisations, management and human resources departments to develop a better understanding of the causes and effects of stress. This will better equip them to reduce the pressures which cause stress and / or increase resources for coping with those pressures.

1.1. Rationale for Analysing Stress

According to a report by the European Agency for Safety and Health at Work (2001), evaluation data on stress management programmes are relatively rare. Whilst it may seem obvious that such an intervention should promote employee health and reduce stress levels, there is not yet sufficient data to confirm that they do.

This study therefore will aid in the process of arriving at some conclusion to the abovementioned problem.

In October 1999, Durban Metro Electricity (DME) ran a Stress Management Programme at the Durban Metro Electricity Training Centre. This was in response to the popularity of the programme amongst employees at DME. According to a human resource officer, there is a perceived demand for the programme from employees themselves. Hence, an e-mail was sent out to all employees. Forty employees confirmed that they would attend. This is roughly double the number that

usually attend such a programme.

The above indicates that there is a recognition of the stress existent amongst employees. It also indicates a perceived need, by the company, to deal with and manage the stress that DME employees are experiencing. In addition to this, it indicates a people-centred focus emerging within the company.

This research is being conducted to determine whether Durban Metro Electricity has an understanding of the causes and effects of stress amongst its employees. The research aims to determine whether the Stress Management Programme is successful in reducing the stress levels of employees and is helping them to cope better with the stress they experience. Hence, the research will determine whether the strategy implemented by Durban Metro Electricity is successful.

1.2. Hypotheses and Objectives

The research hypothesis is:
The levels of stress of employees at Durban Metro Electricity will decrease once they have attended the Stress Management Programme.

The following research objectives have been formulated:
- Does stress manifest itself at high levels within the employees at Durban Metro Electricity, and if so, why?
- Does the stress management programme help to reduce these stress levels. If so, how does it do so?
- Does the stress management programme help to improve their coping strategies ?
- Are there significant differences in stress levels and coping abilities before and after the stress management programme?

1.3. Background on Durban Metro Electricity

The policies of Durban Metro Electricity are determined by the City Council and it operates under the Electricity Act of 1987.

Durban Metro Electricity's mission is to provide services that satisfy the electricity needs of the community, including public lighting, whilst maintaining sound business principles. It has a strategy in place to develop the Electricity Department in such a way that it maximises the value of its electricity supplies and services, and makes effective use of its resources (Durban Metro Electricity Annual Report, 1997/1998).

The company supplies more than 475 000 customers in the Durban Metropolitan Region, as well as some adjacent areas such as Tongaat, Mpumalanga, and Magabeni. It buys approximately six percent of the total energy generated by Eskom (Durban Metro Electricity Annual Report, 1997/1998).

Electricity is purchased at 275 000 volts from Eskom and is then transmitted, transformed and distributed for use by a range of customers from urban to rural areas (Durban Metro Electricity Annual Report, 1997/1998).

According to the Durban Metro Electricity Annual Report (1997/1998) Northern, Central and Southern Distribution Regions all have Planning Divisions, Customer Services Divisions, Construction Divisions, Maintenance Divisions, and Operations Divisions. There is also a Technical Services Department, a Finance and Administration Department, and a Human Resources Department. The Human Resources Department provides a range of services to other departments of Durban Metro Electricity, and consists of the following subdivisions.

The Training Division: This division ensures that there is a supply of well-trained staff to meet the needs of the Service Unit. The policy of this division is to meet or to better national standards. The policy also addresses past deficiencies in learning

opportunities. As a result, in 1999 a new Training Centre was established. This allows for cross training. This means that a combination of literacy classes and engineering courses can be taken by employees who have an interest and a need for both. Thus, a new approach to training has been undertaken.

The Engineering Section: This division covers development and training in all aspects of engineering, and grades of engineer, from general worker to apprenticeship, and post-graduate engineering. This section has a close working relationship with the Methods and Standards Division so as to ensure quality.

The Education and Development Section: This division provides career guidance, psychometric and competence testing. It also aids other organisational developments.

The Human Resource Services Division: This division provides services in Recruitment and Selection, Industrial Relations, Staff Welfare, Human Resources Planning and Special Projects. An Employee Assistance Programme also exists, along with specific human resource interventions / programmes that have been undertaken in various departments.

There are also joint programmes taking place between the Training and Human Resource Services Divisions. This has resulted in the Clerical Development Programme, the Training and Development Programme, Affirmative Action Development Programmes, Stress Management Programmes and Apprenticeship Recruitment (Durban Metro Electricity Annual Report, 1997/ 1998).

The training division was active in the implementation and the conduction of the Stress Management Programme. This research was undertaken in collaboration with the training division.

1.4. The structure of DME

Durban Metro Electricity has a clearly defined hierarchical structure. An organogram shows that an employee is answerable to line management, who inturn is headed by middle management. Middle management are responsible in answering to the Director, who then reports to the Executive Director. Upon perusing the organograms of DME for the Executive Section, the Human Resources Division, Area Maintenance Section and Area Construction Division, it can be concluded that there is a definite order of responsibility and accountability from the upper levels to the lower levels (See Appendix A-1).

Although DME is in the process of restructuring their different departments, the day-to-day business is run very much along the hierarchical lines mentioned above. DME is currently reassessing their "As Is" and "To Be" processes. Once this is completed, employees can look forward to working in an environment with a flatter structure where teams work together and are responsible and answerable for their own tasks. It is possible that this might lead to a reduction in stress amongst employees.

1.5. Summary

Pressure is evident in everyday life and work situations. People have to continually adapt to the constant changes occurring in the workplace. To do this, they need a range of resources and strategies to cope with such pressures. However, there are times when the pressure becomes too great for people to deal with. People may not know how to cope with the pressure. This inability to cope results in negative stress which can be referred to as distress.

Organisations need to recognize and understand stress, its negative effects on the employees and the costs to the organisation. This will facilitate steps toward reducing or eliminating pressures or stressors in the workplace such as stress

management programmes. It also helps employees to improve their coping resources.

Durban Metro Electricity is such an organisation. Stress Management Programmes have been implemented and are popular with employees. However, the aim of this research is to investigate the success of the Stress Management Programme and to suggest how it can be improved in terms of the objectives stated.

Chapter Two

Literature Review

2.0. Introduction

There are many different definitions and descriptions of the term stress and its process. This literature review will attempt to define the concept of stress, and work stress in particular.

The term stress was first introduced into the Allied Health Sciences by Hans Seyle in 1926. He described stress as "the sum of all non-specific changes (within the organism) caused by function or damage", but more recently, he saw the concept of stress as " the non-specific response of the body to any demand" (Seyle, in Everly, 1990). The term stress was used to refer to a response by the body to any perceived threat. The stimulus of stress, then, is called a stressor, as it engenders a stress response (Everly, 1990).

2.1. Defining Stress

Lazarus (in Williams, 1994:39) states that: "Stress refers to a very broad class of problems differentiated from other problem areas, because it deals with any demands which tax the system, whatever it is, a physiological system, a social system, or a psychological system, and the response of that system".

Stress is seen as a broad entity that could be caused by a broad range of stimuli or stressors. It can be seen as a process by which environmental events or forces, called stressors, threaten an organism's existence or survival as well as the process by which the organism responds to this threat. The workplace, therefore, can be seen as an environment that places stressors upon individuals, which threatens their survival (Lazarus, in Williams, 1994).

According to Tyrer (1990:4), "Stress is not defined by what causes it, but by a person's reaction to the cause, technically called the stressor".

Stress is the reaction of the body and mind to change. How an individual adapts to the change is a key indicator of their coping ability. Therefore, stress is the state of the individual when he or she perceives that their well-being is endangered and that all their energy must be diverted to their protection. As a result, an individual determines when stress will or will not occur. How an individual perceives the stimulus or the situation impacts on their stress (Appley & Trumbull, in Stress & Coping, 1977).

Seyle (in Stress & Coping, 1977) speaks of the three different phases in the stress process:

- the first phase is the "alarm reaction" phase. The term is used for the initial response to the stressor. It is the bodily reaction and defensive forces in the organism.
- the second phase, "the adaptation phase" refers to the situation when, upon continued exposure to the stressor, a stage of resistance (adaptation) follows. Therefore, no living organism can be maintained continuously in a state of stress (alarm). If the stressor is so damaging that the body cannot survive exposure to it, the result may be death. However, if survival is possible, the alarm reaction is followed by resistance.
- the third phase is when, after prolonged exposure, a stage of exhaustion occurs within the organism.

This process was named by Seyle (in Stress & Coping, 1977) as General Adaptation Syndrome (GAS).

Lazarus (in Stress & Coping, 1977) says that cognitive processes determine the quality and intensity of an emotional reaction. Emotions are not constant. They change over time based on feedback from previous situations and from their own previous reactions. In stress situations, the changes in emotions reflect the person's

10

continuous efforts to master the interchange by overcoming the damage, postponing or preventing the danger, or by tolerating it. As a result, to cope with a situation and to regulate the emotional response, the person constantly reappraises their relationship with the environment. This leads to changes in the intensity and quality of their emotional reaction.

As gleaned from the above theorists, certain amounts of stress are acceptable and even helpful to an individual. However, if stress is repeated or prolonged, the body becomes exhausted and illness (such as ulcers, high blood pressure, heart disease and nervous breakdown) can result. Stress created by one's job may be due to degenerated work relations, violence and harassment, gruelling shiftwork systems, monotonous tasks, work overload, poor communication and conflicting demands (or role ambiguity) (Craig, 1991). These may then cause the above physical ailments.

According to Giddens (in Newton, 1995), workplace stress can be seen as a consequence of the increasing uncertainty of modern life. This also refers to the ever-changing dynamics within businesses globally, the occurrences of organisations restructuring, downsizing and merging, as well as the fluctuating trends in markets today.

Giddens (in Newton, 1995) then says that for individuals to survive in such a world, they need to create a self-identity and more or less continually reorder it against the backdrop of changing experiences of everyday life, and the fragmenting tendencies of modern institutions.

Moss (1981:4) explains the cause of stress by defining stressors as: "Any objective condition or any change in the work environment that is perceived as potentially harmful, threatening, challenging or frustrating" and as "Any set of circumstances related to work that requires change in the individual's on-going life pattern".

He explains how the modern concept of stress links stressors and the reactions that

follow in a dynamic sequence of conditions (see Figure 1) :

- The impact of the environmental stress (stressor) is a threat to the individual;
- Mediating factors such as social support systems influence the way the individual perceives the stressor(s) and thus modify its impact;
- The coping ability and other characteristics like vulnerability influence how the individual deals with the perceived threat;
- Stress responses that accompany the coping process are experienced as distressing and may trigger illness; and
- The consequences of the process (either confidence and mastery or maladjustment) become evident over time.

(Moss, 1981)

Figure 1: Model of the Stress Process.
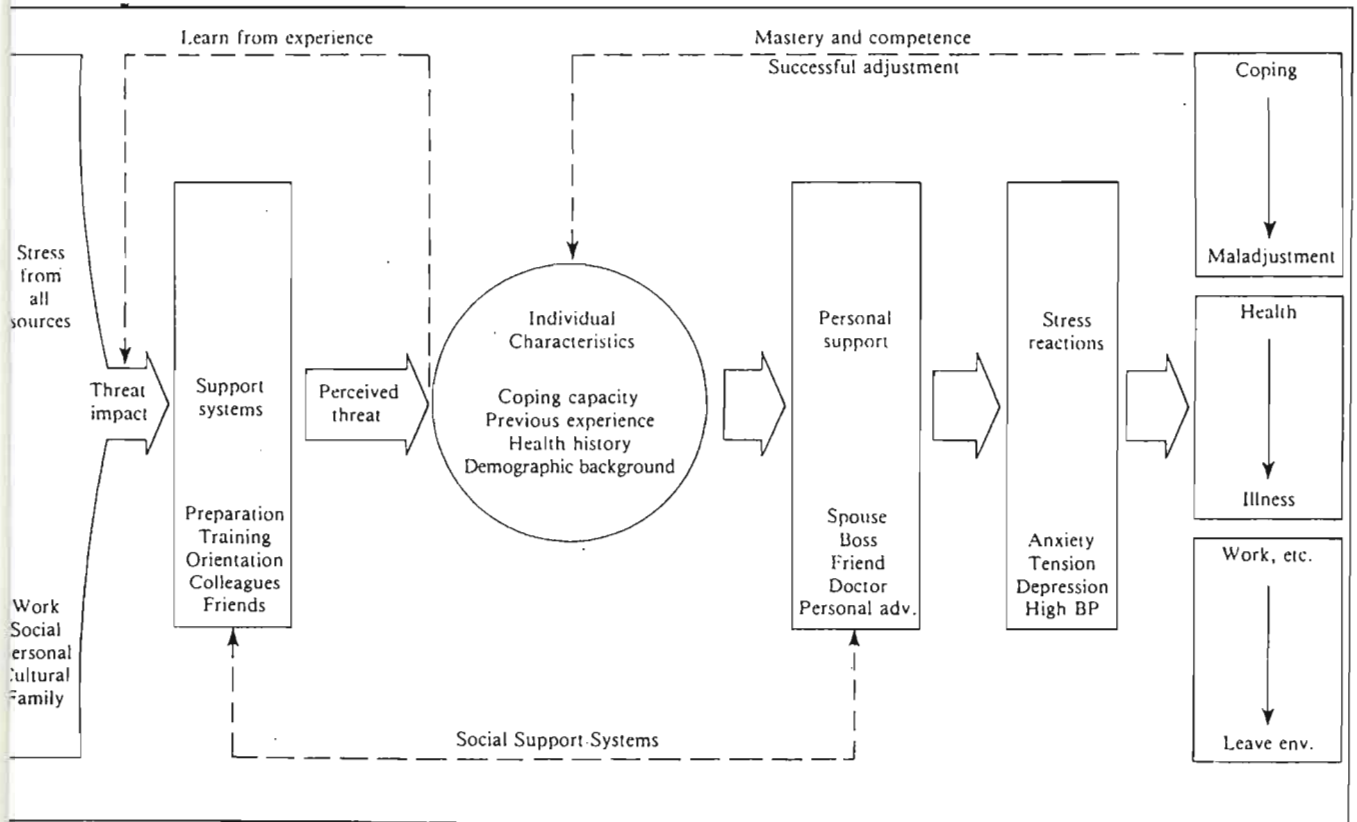
Source: Moss, L. (1981:5) Management Stress. London, Addison-Wesley Publishing Co.

According to Genazzani, Nappi, Petraglia and Martignoni (1991: 261), it is more

useful to refer to a stressor as a stimulus, or an event that causes physiological and psychological changes, and to refer to the changes that do occur as "stress response".

Williams (1994) indicates that there is a difference between the terms stress and pressure. Stress, as implied above, can be described as one of the most inaccurate words in scientific literature, as it is used to describe both the sources and effects of the stress process. However, when individuals are under pressure, they can be described as being under stress as stress is the stimulus or output of the process. Nevertheless, when an individual is suffering from anxiety or depression, then stress can be described as the response or the outcome of the stress process.

Pressure can be perceived as the input, or the start of the stress process. Stress can be perceived as the outcome of the stress process, that is, what the individual is suffering from.

Stress does have physical, psychological and emotional components. The consequences of stress can also affect one's mental, physical and social health. However, it is reiterated by other writers that stress is not inevitable (Leatz & Stolar, 1993 and Palmer & Dryden, 1995). This is because pressure is the force that may produce stress unless it is actively and well managed. Pressure can be perceived as a neutral force that can produce either positive or negative outcomes, depending on the individual's ability to adapt to a situation, as well as on their use of coping skills. Thus, pressure can be a stimulus that an individual needs to enjoy life, to be challenged, and to experience new things, or it can be a cause of anxiety, inability to cope and perform, and a cause of depression (Williams, 1994).

Lazarus (in Williams, 1994) and Dobson (1982) both state that an individual's stress reaction depends on how the person interprets, consciously or unconsciously, the significance of a harmful or threatening or challenging event.

A change in emphasis in the stress process from the nature of the threat to the attitude of the individual, can be seen. As a result, the attitude governs the outcome of the stress process, not the threat itself. In a work situation, the less a person feels able to cope with the threat of a change in company structure, or with a heavier workload, the more stress will be experienced.

Stress, therefore, is a perceived quality and a very personal entity within an individual, and there can be no absolute measure of stress. Stress is, therefore different from other physiological and mental illnesses as objective measurement is extremely difficult to attain. People perceive stress differently because their values, resources (coping abilities, social/ familial support, communication skills, knowledge of relaxation techniques, and physical health), feeling of control, and past experiences play a role (Leatz & Stolar, 1993 & Williams,1994).

Cooper (in Williams, 1994: 39) states that : "It can be seen that a particular type of person under pressure from certain kinds of environmental stressors can find himself in a stress state. Whether or not a person will be able to cope will depend on his perception of threat from the stimuli, his coping abilities, the strength of the stressors and other factors such as physical and psychological health at the time of the person-environment interaction".

Cooper (in Williams, 1994) formulated a model that shows the stress process as an interaction between an individual and his or her environment. It is known as the "person-environment fit", and is most generally accepted by stress researchers. This will be covered in detail in the theoretical framework chapter.

From the above definitions and explanations, it can be observed that there is no set definition of stress. The research will be looking at stressors and stress by taking into account the different definitions mentioned above. However, it will use Lazarus' (in Williams, 1994) theoretical stance as a basis for understanding stress.

14

2.2 Theoretical Models of Stress

2.2.1. The Psychosomatic Model of Stress

This model's fundamental ideology is that, where strain is experienced in one bodily system, it may produce pathological conditions in other parts of the body, thereby affecting an individual's physiology. However, some theorists criticised this view as they claimed that it is the individual's early conditioning of responses that is crucial to the emergence of psychosomatic diseases, rather than particular emotional states (Dobson, 1982).

2.2.2. The Protective Reaction Pattern Model of Stress

This model was formulated by Wolff (in Dobson, 1982). It states that when the body is threatened in some way, a complex reaction takes place to protect it and remove it from threat. Wolff also sees stress as a stimulus and a response. However, there are criticisms which show the model's failure to explain why some people act and react differently from others toward harmful stimuli.

2.2.3. Psychological Responses to Traumatic Experiences

Janis (1954, in Dobson, 1982)) formulated three main aspects of this model:

i. Disaster or traumatic event

ii. The individual's psychological response to the disaster or traumatic event

iii. The situational determinants of the stressful event and the situational determinants of the response.

Janis (1954 in Dobson, 1982) also shows how major disasters can be divided into three phases:

[i] Threat : the person becomes aware of the approaching danger;

[ii] Danger - impact : person comes face-to-face with danger. Survival here depends on the efficiency of responses to the situation;

[iii] Danger of victimization: the person recognizes the consequences of the disaster for himself and other people.

15

The person then could react in five different ways:

    [i] Apprehensive avoidance - where denial is used to free themselves from the stressful event.

    [ii] Stunned immobility - this is the almost or complete lack of mental and physical activity.

    [iii] Apathy and depression - where the person is impervious to the stressful event.

    [iv] Docile dependency - the person shows no sign of independent behaviour.

    [v] Aggressive irritability - the person could attack anyone who causes them anger or frustration.

Each of the above is seen to reduce the individual's intellectual and mental efficiency. However, it has not been taken into account that some individuals may behave / react in a way which does not cause the reduction of mental efficiency (Dobson,1982).

2.2.4. Responses to Extreme Stress

The model formulated by Basowitz (in Dobson, 1982) incorporates the concept of anxiety into a model of stress. Anxiety is defined as the conscious and reportable experience of intense dread and foreboding which is internally derived and unrelated to external threat (Basowitz in Dobson, 1982). It is thus suggested that anxiety occurs when a person is faced with any threat. Stress in this model is seen as types of stimuli which cause anxiety. The model is used mostly to explore the responses of groups of people who have experienced forms of stress collectively . This model could be relevant to this research as it could be related to a large number of employees who are experiencing common stressors in their workplace.

2.2.5. The Interactional Model

The Interactional Model was formulated by Lazarus (in Dobson, 1982), who states that stress is concerned with an individual in his context or environment. However,

he also emphasises that stress is not only a result of external factors, but also depends on individuals and how well they can face stressful situations. Thus, stress is not something that exists outside of the individual. The person's perception of the stressful situation is seen as more important.

The interactional model states that stress occurs when there is an imbalance between demands and resources. The nature of the imbalance is ongoing as environments influence people, and people influence environments (Lazarus in Ross & Altmeier, 1997).

The model explains that when a person evaluates a certain event, demand or situation, this is seen as Primary Appraisal. If a person perceives potential harm in the situation, this is seen as a threat. Secondary Appraisal is the individual's attempt to define the coping options available for dealing with the threat or challenge. In addition, coping responses that have been internalized by an individual (ie: used before by the individual in another situation), have an influence on the future appraisal of the event or situation as stressful (Lazarus in Ross & Altmeier, 1997). Hence, stress is a combination of personal issues and concerns which change over time. The responses and resources that people call upon in times of stress can also change over time.

The model reflects that the balance of demands and resources defines stress. Hence, where demands outweigh resources, stress may occur. However, if resources are available to meet the demand, a challenge is perceived by the individual and they are able to cope better with the situation. Coping is therefore the behavioural and cognitive efforts an individual makes in order to manage the demands of a stressor.

On the following page is a diagram of the Interactional Model of Stress as seen by Sutherland and Cooper (2000) that illustrates the explanation above well.

ENVIRONMENT	INDIVIDUAL	RESPONSE
potential source of stress	attitudes, wants, needs desires, personality	imbalance = Strain or distress
=	+	
actual demand ——→	age, gender, educational level	—————→
+	=	
background + situational factors ↑	actual ability	coping Successful	unable to cope
	Judgement of threat (Cognitive appraisal) = Perceived demands + ability to cope with demand	overcome problem	symptoms of stress
FEEDBACK ◄————	————FEEDBACK◄————	——FEEDBACK

Stress Perception - An Interactive Model of Stress

Source: Sutherland, V. J. & Cooper, C. L. (2000: 55), Wales, Macmillan Press Ltd.

2.2.6. The Cognitive-Appraisal Model

The Cognitive Appraisal Model is similar to the interactional model. Stress is seen as the product of the person's appraisal of situations and events. Thus, their perceptions and interpretations determine whether a situation is stressful (Dobson, 1982).

However the researcher finds the interactional model of stress particularly relevant to this research as it can be applied within training programmes and stress management programmes for employees. Such a model can be used as a theoretical basis to help stressed employees change their perceptions of their current employment situation, into a more positive and optimistic perception. Stress can also be seen as a motivator to provide the employee with the impetus to upgrade themselves and make themselves more marketable, and achieve their goals. This helps the individual to cope better with the stress by taking positive

action.

2.2.7.The Systems Model of the Human Stress Response

This model is also extremely relevant to the research being done, as it explains the interrelatedness and multidimensionality of the actual stress process and the stress response (Everly, 1990). The model has six key elements:

(i) The Stressor Event

There are two types of stressor events, the psychosocial and the biogenic. The psychosocial stressor can be real or imagined. They are events that do not directly cause the stress response, but work through cognitive - appraisal mechanics, and 'set the stage' for the emergence of the stress response. Biogenic stressors directly cause the emergence of the stress response as they work directly with the emotional and neurological triggers in the body and bypass the cognitive appraisal mechanisms (Everly, 1990).

(ii) The Cognitive Appraisal - Affective Integration Element

The Cognitive Appraisal - Affective Integration Element operates from the point of view that all reality is created by human perspective. The cognitive appraisal approach looks at the process of how people assign meanings to the world or how they interpret it. Affective integration refers to the blending of the emotions felt into the cognitive interpretation. As a result, psychosocial stimuli can form psychosocial stressors, depending upon the individual, their vulnerability to biological predispositions, personality patterns, learning history, and available resources for coping (Everly, 1990).

(iii) Neurological Triggering Mechanisms of the stress response

These are the locus cerulus, the limbic system, and the hypothalamic efferent triggering complex. These structures in the body appear to give rise to the stress response (Everly, 1990).

(iv) The Stress Response

This consists of complex psycho-physiological processes. The most immediate response to a stressor occurs via the direct neural innervations of end organs. The intermediate stress effects are due to the neuroendocrine 'fight or flight' axis. The last stress response system is the response to the stimulus, where the endocrine axes are used as pathways to react to stressful stimuli. The endocrine system relies mostly on the circulatory system for transportation, and this is why a high intensity stimulus is needed to activate this axis (Everly, 1990).

(v) Target - Organ Activation

The neural, neuroendocrine, and endocrine constituents of the stress response either activate, inhibit activation, or catabolize an organ system in the body eg: the cardiovascular system, the skin, the gastrointestinal system, the brain and its mental status. The more consistent the activation, the greater the likelihood of stress - related disease, as the system does not have time to recover from one stress response, before it has to prepare for the next one (Everly, 1990).

(vi) Coping

The major factor in determining the impact of stress upon an individual is through assessing their perceived ability to cope. Coping can be defined as efforts, that are both intrapsychic and action-orientated to manage environmental and internal demands and conflicts among them which tax or exceed a person's resources (Cohen & Lazarus, in Everly, 1990). Thus coping can be seen as environmental and / or cognitive tactics used in an attempt to bring about homeostasis once more in the body. If coping strategies are successful, then target-organ activation is reduced, and homeostasis can be obtained. If not, then target-organ activation is maintained and stress-related disease in the target organ area may develop (Everly, 1990).

2.2.8. The Person - Environment Fit and Job Stress

This theory of stress describes the interrelationship of the person and the environment in terms of their 'fit' or 'congruence' with each other. Two kinds of fit

have been posited by this theory :

(i) The extent to which the person's skills and abilities match the demands and requirements of the job. Thus, the success of the fit between the person and an aspect of the work environment is measured by determining how much work-load an individual has, and then, by asking the individual how much work he or she would prefer to have. By subtracting the amount preferred from the amount in the job environment, a quantitative score of the person-environment fit is obtained (Everly, 1990).

(ii) The extent to which the job environment provides resources to meet the individual's needs or motives. Thus, job stress can also be described in terms of motive arousal. An individual can experience stress if there is a discrepancy between their motives and needs and what is supplied by the job environment (Everly, 1990).

When a person-environment misfit occurs, it threatens an individual's well-being, and therefore stress occurs along with manifestations such as anxiety, depression, or job dissatisfaction. However, it must be reiterated that not all people experience a given job situation as stressful. The stress only occurs when the abilities of the person are not congruent with the demands of the job. Experiencing stress at work is a subjective response that results from a combination of particular objective conditions of work as well as particular personal characteristics (McMichael &Van Harrison in Cooper & Payne, 1979, and Edwards, Caplan & Van Harrison in Cooper, 2000).

The theory of person-environment fit emphasises that job stress will not be reduced by a general programme that treats all individuals identically. The relationship between each worker's needs, abilities, values and the job environment must be taken into account (Van Harrison in Cooper & Payne , 1979).

Nevertheless, the theory itself is similar to the interactional model posed by Lazarus (in Williams, 1994 & in Ross & Altmeier, 1997). The model explains that the

environment or situation is not seen as inherently stressful, but a combination of the situation and the individual, with their specific personality, behaviour patterns and life-situation circumstances, could have caused the stress.

Cooper & Cummings (in Cooper, 2000) posit that an organisation can implement individual-oriented interventions such as relaxation techniques, meditation, physical exercise facilities, time management workshops, wellness programmes, and stress inoculation training. These help employees identify the stress causes in their lives and helps them devise personal coping behaviours, which in turn help to reduce anxiety, depression and blood pressure.

However, the limitation of this is that it would be extremely time consuming and costly for an organisation to implement an individualistic programme for specific people.

To counteract this, an organisation can then use organisation development interventions to reduce stress. Interventions such as job enrichment programmes, employee involvement programmes, self-managing work teams (for autonomy), role clarification interventions, skill-based pay and gain-sharing, and decentralised structures to facilitate effective communication (Cummings & Cooper in Cooper, 2000).

2.3. The Physiology of Stress

Stress can also be described as a term which " defines a physiological response of each subject to environmental changes" (Genazzani, Nappi, Petraglia & Martignoni, 1991: xv). This means that a subject (individual) has to undergo continuous bodily adaptation to internal and external changes which threaten their biological homeostasis. The ability to cope with stressors is made possible by integration of the endocrine, autonomic, immune, emotional, and behavioural responses. This

22

integration of responses can then be characterized as the stress response.

The stress process itself starts with a perceived threat that triggers a "fight or flight response" (Williams, 1994:32). This is due to the autonomic nervous system (ANS) which is responsible for maintaining the balance in bodily functions, such as body temperature, heart rate, and digestion. The ANS consists of sympathetic and parasympathetic parts which complement each other. The sympathetic nervous system (SNS) converts stored energy into usable energy, and is thus responsible for the "fight or flight" response. The parasympathetic nervous system (PNS) reverses the process, and is responsible for building up energy stores. When the two systems are in balance, then homeostasis is present (Williams, 1994).

When a threat is interpreted by an individual, the brain, acting through the hypothalamus, stimulates the SNS and the pituitary gland. The chemicals released produce great internal hormonal changes in the body: blood drains away from the extremities of the body and the stomach, to increase the supply of blood to the brain and vital organs. Simultaneously, the heart starts to beat faster and blood pressure rises. The individual's breathing changes, and the muscles tense, in anticipation of action. In addition, the pituitary gland releases a range of hormones to maintain performance and provide instant energy, and the body's resources switch from long-term to short-term survival so that the body is optimized to overcome the threat. Once the threat has passed, the chemical and hormonal levels return to normal and homeostasis is regained (Williams, 1994).

In recent times however, it is not only the nature of the threat that is different, the duration of the threat is also different. Organisations today are undergoing continuous change and are constantly adapting to their global, socioeconomic, and political environments. Thus, there is constant modification to organisation structures, performance, and operations.

Thus, individuals in organisations are constantly attempting to adapt to change

(which they may perceive as a threat). However, if the body continuously prepares itself for action, and is in constant anticipation of threat, then the body never has a chance to return to normal. It then reaches a point where it can no longer sustain the imbalance in its chemistry and it becomes exhausted. With the prolonged exposure to continual threats, the body begins to lose the ability to switch to the PNS, and the heightened state of awareness and anticipation becomes the norm. The body gets used to the discomfort of stress, and so the individual can ignore it, but the stress still does damage to the body. Individuals may experience an increase in heart and respiration rate, dilation of pupils, dry mouth, sweating, increased blood supply to the brain, and decreased blood supply to vital organs. Over a long period of time, this could result in stress-related illnesses such as hypertension or high blood pressure, migraine headaches, asthma, peptic ulcers, and depression (Williams, 1994).

2.4. The Stresses of Work

From the above, we can observe that continuous, long-term threats and perceived dangers from workplace pressures can lead to damage to the human body, resulting in physiological illness and disease. To prevent this from occurring, the perceived threats and dangers have to be understood and anticipated. Action can then be taken to prevent such perceived danger resulting in stress.

According to Sutherland & Cooper (2000), McDonald & Doyle (1981), Craig (1991), Levi (1981) and Bennet (1994), stress is endemic in most people's working lives. Common sources of stress cited by the above theorists are:

2.4.1. Low Pay

This can result in a struggle for workers to provide for themselves and their families. The worker's leisure, social life and family life can thus suffer as they become more dependent on working overtime to meet their financial requirements. In addition,

feelings of personal inadequacy and insecurity may manifest themselves in the individual. It is important to have in place payment systems and wage levels which are fair and which reflect the contribution of the individual to the organisation (McDonald and Doyle, 1981 and Williams, 1994).

2.4.2. Incentive Payment Systems

Many workers are paid for the speed at which they work, not for the safety rules to which they adhere whilst working. As a result, workers work fast to earn more, and thus sacrifice their safety. This type of piece-work pay can produce anxiety and fatigue (Bennet, 1994 and McDonald and Doyle, 1981).

2.4.3. Job Design

In the past, production systems entailed jobs that were divided into smaller and smaller elements, requiring less and less skill to perform a job. This resulted in low job satisfaction levels, alienation from work, and thus, stress in dealing with the monotony of the unchallenging work required.

Presently, however, a greater amount of multiskilling is required on the part of workers. Work is becoming more complex, and this causes stress as well. Nevertheless, teams are now being recognized as a crucial element within organisations. Teams consist of a group of employees who rely upon each other to achieve an organisational goal (Senge, 1994). This implies that some of the stress is shared amongst employees, reducing its negative effects.

According to Bennet (1994), careful job design may also minimize the degree of stress, especially in relation to the extent of the division of labour, and workers= abilities to cope with the difficulty of their tasks.

2.4.4. Work Organisation

In the past, work organisations tended to be structured along the lines of a hierarchy of authority, where those people in the higher levels control those in the

lower levels, thus resulting in authoritarian supervision. Consequently, conflict and tension may occur between the higher and lower levels in the organisation (Zuboff, 1988).

However, organisations are slowly turning toward teamwork, hence using flatter structures of authority, and more flexible workers who have a variety of work skills (Senge,1994).

2.4.5 Shiftworking

Shiftwork is done to efficiently meet the needs of industry, to maximize the usefulness of expensive technology and to increase profit. Evidence suggests that shiftwork can be a potent source of stress. Employees are required to engage in work activities when other people are resting or sleeping. Conversely, they must sleep at a time when others are working and active during the day. This has a biological and emotional impact on the individual (Sutherland & Cooper, 2000).

Sutherland & Cooper (2000) say this type of work disrupts a worker's normal pattern of biological, psychological and social functioning. It is in conflict with the body's normal rhythms, and can cause great fatigue, and can affect the family and social life of the worker. Studies indicate that night-shift employees tend to have a greater number of performance failures and reduced productivity and efficiency. Employees who complain about lack of sleep due to shiftwork have also had significantly more work accidents, repeated accidents, and sick days than those who did not have sleep problems.

This is because there is a misfit between the workers and their environment, as the altered rest and activity patterns required from them are outside of the conventional daytime range. It has also been found that although the endocrine system does start to adapt to the environmental demands induced by shiftwork, the usual one week cycle does not suffice for a total transformation of night into day, and vice versa (Levi, 1981).

It has been suggested that three factors must be considered for successful coping with shiftwork: sleep, social life and circadian rhythms. These are all interrelated. Hence, problems with one may impact upon the others. Hence, timetables or rosters should be designed to maximize the positive effects and minimize the negative impact of shiftwork. This could be done by rapidly rotating shift systems with a few night shifts in succession. This may be the best strategy for an employee (Sutherland & Cooper, 2000).

Craig (1991) suggests that employees obtain the benefits of exercise, physical relaxation and healthy food to reduce stress. In addition, the use of a counselling service could help employees to deal with personal or work crises.

2.4.6. Work Overload or Underload

When an individual experiences the demands of work as excessive and finds that they cannot cope with such demands, they are experiencing work overload. Work overload can further be divided into a qualitative and quantitative nature: Qualitative work overload refers to the difficulty of the work, whereas quantitative work overload refers to the amount of work that is perceived as too much. Both work overload and underload are potential sources of stress in the workplace. When the demand for work exceeds the ability of the individual to meet the demand then exhaustion or burnout can occur. Quantitative overload may result in boredom, apathy and dissatisfaction, and depression due to the lack of challenge at work. Qualitative overload may result in a lack of self-esteem. Qualitative underload occurs when the individual is not given the opportunity to use their acquired skills and develop their potential (Sutherland & Cooper, 2000).

French & Caplan (1973, in Cooper & Payne, 1979), say that both types of work overload produce at least nine different symptoms of psychological and physical strain, ie: job dissatisfaction, job tension, lower self-esteem, threat, embarrassment, high cholesterol levels, increased heart rate, increased smoking and skin resistance. Work overload was greatly linked to indicators of stress such as: escapist drinking,

absenteeism from work, lowered self-esteem, and absence of suggestions to employers. Work overload should not be seen in isolation, but should be seen relative to the individual's capacities and personality (Cooper & Payne, 1979; McDonald & Doyle, 1981).

Work underload can be described as occurring when an individual experiences monotonous, routine, and repetitive work. This can also be stressful, as workers become bored, frustrated with doing the same work over and over again under pressure of time (Sutherland & Cooper, 2000 and McDonald & Doyle, 1981).

2.4.7 Job Insecurity

The anxiety caused by the idea that individuals can lose their jobs at any time is highly stressful. With the South African economy currently becoming more flexible in nature, and with unemployment levels, redundancies and retrenchments reaching a peak, most workers feel that the impending loss of their job is almost inevitable. In confronting the challenges and changes of globalisation, companies and organisations are involved in extensive restructuring, resulting in obsolescence of staff (Basckin, 1996; Cooper & Payne, 1979; McDonald & Doyle, 1981; Williams, 1994).

Anxiety related to job insecurity is one of the most common reactions to stress. It is a consequence of the perceived danger or threat the individual expects. Fatigue could also lead to anxiety. It is the result of long-term strain and pressure upon an individual who is suffering from the effects of work overload. Fatigue aggravates anxiety, as well as decreasing the ability of the individual to cope with the problems facing them. Concentration and attention to important issues are greatly reduced when an individual is anxious. To deal with such anxiety, the circumstances of the environment in which the person functions need to be modified in some way (Bennet, 1994 & McDonald and Doyle, 1981).

In addition, when employees feel undervalued and frustrated in attaining a sense of

achievement, and when there is a mismatch in their expectations, they may experience stress. The ability to use and develop skills is a significant predictor of self-esteem. Lack of promotion may become a potential source of stress for an employee who has mastered their job, but gets no recognition for their skill. This is a widespread problem in organisations today, as most organisations are following the trend toward downsizing and restructuring. Hence, career movement has changed from a clearly defined path, to one based on proof of performance, efficiency, and visible commitment. An employee has to be indispensable to retain firm ground in their organisation. Such continuous threat to one's job can be linked to several health problems such as ulcers, colitis and muscular complaints (Sutherland & Cooper, 2000).

Chronic fatigue and anxiety may lead to an increase in feelings of hopelessness and inadequacy, which in turn lead to depression, dejection, apathy, hostility and aggression, psychosomatic complaints (eg: insomnia), and neurosis. These characteristics tend to form within individuals who feel that they have very little control over their work situation, and see no way in which they can change it. Hence, employee participation in decision-making, provision of training and staff development opportunities, job rotation, and involvement of employees with teams may alleviate some depressing circumstances (Bennet, 1994 and McDonald & Doyle, 1981).

2.4.8. Organisational Hierarchies

Hierarchies within organisations affect social relations and cause psychological pressures at work. In the past, almost every organisation was structured along the lines of a bureaucratic hierarchy. This means that every person or department had a set of rigidly defined jobs specified according to the particular work activities they involve. In addition, power and authority were exercised on the basis of rigid rules which reflect the superior / subordinate system of the hierarchy. Such hierarchies have potential to create conflicts, tensions and pressures at work. These can lead to ill health and disease as the nature of the bureaucratic hierarchy determines the

relationship of workers to their work, and sets limits to their freedom to organise their work. This may produce frustration, anxiety and uncertainty, which is inherently stressful. In addition, when employees' knowledge, skills and experiences are not fully applied to their work, and their initiative is suppressed, workers may not develop to their maximum potential (Bennet, 1994 & McDonald and Doyle, 1981).

The superior / subordinate relationship was based on the separation between those who make the decisions and those who carry out the decisions. Since each superior was responsible for the performance of the subordinate, he or she tended to invade every area of autonomy of the subordinate. As a result, the amount of control exercised over work is removed from the employee and is instead determined by the hierarchy. Conflict can arise from such a situation because employees may experience frustration at continually being subject to arbitrary questioning and discipline at work (Craig, 1991 and McDonald and Doyle, 1981).

Thus, the organisational structure could be a source of conflict and stress, as an individual's freedom, autonomy and identity are greatly lessened. When subordinates experience such frustration, and have no encouragement for their participation in decision-making, poor communication between employees, such as between superiors and subordinates results. It was found by Margolis (in Cooper & Payne, 1979), that such non-participation can also lead to health risk factors such as poor physical health, escapist drinking, depressed mood, lowered self-esteem, low life and job satisfaction, reduced motivation to work, and absenteeism. These could be caused by the anxiety resulting from non-participation and lack of autonomy.

With the shift towards a greater amount of teamwork and flatter structures within organisations, there is a reduction in the amount of stress experienced by individual employees. This modus operandi allows responsibility to be shared amongst employees, as well as encouraging them to be creative and original in their work. However, not all organisations have adopted such a flexible work organisation structure, and may therefore be locked in the past rigid and autocratic ways of

working. Other organisations may have attempted to follow the new teamwork structures, but may not have succeeded in completely modifying their structures.

Sutherland & Cooper (2000) state that the lack of supportive relationships and poor relationships at work with colleagues and superiors can become a potential source of stress, which can lead to little trust and low interest in problem-solving. This could be counteracted by providing for places for work breaks and meals where employees can meet and take breaks together (to improve team cohesiveness) along with their superiors (to improve superior / subordinate relationships).

It is also important that management acknowledge the value of the human contribution to the organisation, communicate their objectives well, and adopt a consistent approach in dealing with subordinates. In addition, they should be flexible enough to allow individuals a degree of control in their jobs (Craig, 1991).

2.4.9. Role Conflict and Role Ambiguity
Role conflict occurs when an employee meets conflicting expectations from his or her superiors. An employee feels confused by the opposing demands or the incompatible goals surrounding the tasks connected with the job. Doing tasks that are not perceived to be part of one's job role can become stressful. This may result in absenteeism, job satisfaction, and elevated blood pressure (Sutherland & Cooper, 2000).

Role ambiguity results from unclear expectations and inadequate information about work roles, vague goals, or goals that are incongruent with an employee's goals, and poorly-written job descriptions. These factors can contribute greatly to the tension and stress levels of an employee, as well as decreased job motivation and satisfaction, a greater sense of futility, and declining self-confidence (Cooper and Payne, 1979 and Douglas, 1996). Role ambiguity is also associated with tension, fatigue, increased levels of anxiety, physical and psychological strain, and high blood pressure (Sutherland & Cooper, 2000).

2.4.10. Lack of Control

This concept is related to that of poor communication between superiors and subordinates, as well as to the adverse effects of hierarchically structured organisations.

The issue of control is a pervasive one throughout stress literature. Many studies have noted the effectiveness of control related manipulations in reducing employees' stressors. They have suggested increased participation in decision-making to counteract stress (European Agency for Safety and Health at Work, 2000).

Employees tend to experience stress when they have little control over management decisions. The outcome of their work is, however, dependent upon such decisions. Employees may feel that they have no control over the organisation, work and work environment due to the fact that there is seldom an opportunity for them to influence their work and the workplace individually (Dew, 1998 and Williams, 1994).

2.4.11. Conclusion

With the negative consequences of stress for employees and their organisations, it seems necessary for the organisations to find some ways of reducing the stress. In addition, organisations need structures or interventions in place to help employees to learn to manage their stress. Such structures and interventions shall be discussed further on in this chapter.

2.5. The Management of Stress

Due to technological advancements, organisations are constantly changing their workplace structure and function. The characteristics currently valued most in the workplace are the ability to work to tight deadlines, the ability to deal with several issues, quick decision-making, moving and working rapidly, as well time-efficiency.

This makes individuals especially prone to stress. Research has found that companies lose millions due to the decline in work productivity and increase in illness and absenteeism from work. These can be distinguished as consequences of stress (Krohe, 1999 and Maynard, 1996).

Stress is present in all organisations, but one has to differentiate between positive and negative types of stress: Positive stress - also known as 'eustress' creates challenge and feelings of achievement, and serves as a critical motivator for certain individuals. It is usually experienced when an individual can deal with the demands made upon them. Negative stress - or 'distress' - often results in dysfunctional employee behaviour, such as repeated errors, low morale and tension. This type of stress usually occurs when an individual cannot deal with the demands placed upon them. (Fontana, 1990 & Douglas, 1996). The manifestation of either type of stress depends on the perception of the situation on the part of the individual.

However, the type of workplace that exists today (and that will exist in the coming millenium) is not humanitarian in nature. Employer-generated causes of employee stress include: overwork caused by downsizing, excessive overtime, overheated offices, and lack of fresh air circulation. In the new and efficient leaner, flatter companies people are working harder as they are feeling the pressure of job insecurity and few promotion prospects. In addition, they are feeling increasingly stressed by the new corporate expectation to do everything better, faster, and more cheaply (Atkinson, 1999; Dutton, 1998, Midgely 1997 and Solomon, 1999).

Such a negative situation for employees can be pervasive as a negative force in the organisation, as employees who cannot cope cost the organisation in revenues. In addition to this, the inability to cope with stress can result in the destruction of relationships amongst co-workers and between employees and customers. Thus, today's workplace has the potential to become a breeding ground of stress and tension that is exacerbated by tight deadlines, high expectations of productivity, and reduced staff complements (Solomon, 1999).

Fontana (1990) states that there are cognitive and emotional and behavioural effects of too much stress.

Cognitive effects are:

- reduced concentration and attention span
- short and long-term memory reduction
- increased error rate
- increased delusion and thought disorders
- heightened distractability

Emotional and behavioural effects are:

- physical and psychological tensions increase
- the ability to relax muscle tone and to reduce anxiety decreases
- hypochondria increases and feelings of health and well-being are reduced
- changes in personality traits may occur (person may become untidy, indifferent and authoritarian)
- existing personality problems heighten
- emotional outbursts may increase
- depression and helplessness may appear
- energy levels may drop along with self-esteem
- absenteeism may increase
- drug or alcohol abuse may rise
- problems may be solved at a highly superficial level

Fontana (1990) suggests taking constructive and proactive action against stressors in the workplace. He states that by identifying the specific stressors that make life difficult, one can make the problem more tangible. Each problem should be analysed and categorised as needing immediate action, future action or to be ignored or adapted to. For example, if there is a problem of overwork leading to stress, future action can be taken. One can identify the precise aspects of the job that are stressful and rationalise or reorganise them. If there is no way one can reduce workload,

there is still the option of forward planning and delegating to reduce the amount of time wasted doing tedious task. This will lead to a more structured approach to work.

Another way of reducing work overload is to use teams to complete challenging tasks. According to Barner (1996) a critical skill for the future will be to maintain team performance in turbulent, high-pressure organisations. This requires managers and the human resource departments to be aware of the warning signs of impending employee burnout.

In order to counteract negative repercussions emerging from workplace stress, it is important that an organisation aid employees in learning to manage their distress, and to foster effective stress management principles which bring about eustress. Hence, stress management programmes are important in any organisation. However, to manage stress in an organisation, it is necessary first to measure and analyze it. Only once this is done, can counter-measures be created to combat it (Douglas, 1996 and Maynard, 1996).

According to Krohe (1999), a company can handle stress in one of five different ways
i. Ignore it ;
ii. Tough it out ;
iii. Find ways to relieve stress ;
iv. Change people so that stress does not bother them so much ;
v. Change the organisation so that people are not so stressed to begin with .

Needless to say, the first two options are not healthy alternatives. However, options three, four and five deserve exploration.

2.5.1. Finding Ways to Relieve Stress
Finding ways to relieve stress entails the organisation promoting the general health of their employees by allowing them time to exercise physically, educating them with

regard to adhering to a good diet, reducing caffeine and alcohol intake and increasing meditation. All this can be implemented within the individual's lifestyle, and can have immediate results.

However, it has recently been found that relieving stress has more to do with getting to the root of an individual's anxieties and working them out, rather than the individual dealing only with physical health. Thus, the aim is to 'reframe' stressful situations in order to bring about eustress (Krohe, 1999). This involves bringing about a change within the individual so that they can deal with stress in a more positive manner, rather than just relieving the symptoms of stress. This is the route that stress management programmes take.

An information feedback intervention will also be helpful. This is a process of assessing stress by getting an idea of employees' preferred and actual working conditions so that a comparison can be made. The greater the discrepancy between the two, the greater the stress. In addition, since all strains are different in nature, it is crucial to get information about the relative importance of working conditions for the well-being of employees. This can be done through focus groups, questionnaires, surveys and recommendations. The information gleaned from here can be used to guide change management programmes as well as stress management programmes. Furthermore, feedback from employees on the intervention programmes themselves is important to gauge their success. There needs to be an ongoing process of upgrading the interventions as the people and the environment constantly change as the stress cycle unfolds (Cummings & Cooper in Cooper, 2000).

2.5.2. Changing People to Reduce Stress

In order to change employees to reduce their stress, organisations need to implement successful stress management programmes that help to bring about a positive change in the mindsets of employees.

According to Dutton (1998), a good stress reduction programme should include flexibility, strength training and various relaxation techniques to actually change the way in which an individual perceives stress, and to enhance people's skills to help them develop better coping mechanisms. Thus, it is beneficial for organisations to conduct seminars on stress reduction and management. Every stress reduction programme needs to begin with a workshop to help the organisation focus on the scope and scale of the problem so that it can be better tailored to the needs of the employees. He also suggests that companies can initiate the implementation of stress management programmes. They should also pass the idea along to a committee of employees so that they can determine how best to address the issue.

This is also related to the concept of a stress audit. This is a costly and time-consuming way of addressing the stress problem in an organisation, but it is also effective. It requires, mainly, acknowledging that the workplace environment can be a source of stress, eg: poor physical conditions, time pressures, culture, lack of job security, no career pathing, poor relationships between co-workers or between management and employees (Worklife Report, 1997). Once these themes are drawn out, the organisation can take corrective action.

Employee Assistance Programmes (EAP) can also play a large part in remedying stress through the teaching of new skills in those areas that are perceived to be the sources of stress such as: time management and communication with superiors.

To determine that the stress exists, and to recognise the employees that are under stress, an organisation needs to have a system in place. One possible system is an human resource stress management policy that is widely communicated throughout the organization and facilitates the identification of early signs of stress. This will allow for timely intervention by means of consulting with and responding sensitively to the employee. Such communication can allow the employee to have some connection and control over the situation. In addition, a written policy that assists managers in recognising signs of stress obliges the managers to think about spending more time with their employees, and not alienating them. If employees feel

37

isolated and unappreciated, they are placed under great pressure and feel stressed. This is because they have a sense of losing control over the work they do and the conditions under which they work (Solomon, 1999).

The culture of the organisation also needs to be assessed. It is crucial for managers to understand how the day-to-day behaviour translates into the overall culture. Management should also understand how the day-to-day behaviour, if stressful, can result in a stressful organisational culture. What is required is the creation of a workplace environment that allows people to extend themselves, to have some breathing space and work support. It should also help them to identify ways to temporarily streamline their workload and to succeed professionally and personally (Solomon, 1999).

The quality of interpersonal work relationships with co-workers, supervisors and colleagues has also been linked to stress. According to Ross & Altmeier (1997) social support has an important influence on how people deal with stress. Having adequate social support buffers the negative effects of stress and improves coping ability. However, if employees experience poor relationships with their colleagues, this may result in relationships that contain very little trust, supportiveness and interests and empathy levels.

Furthermore, even if there are no set formulae to create an eustressful (positive stress) workplace, there are certain additional steps to follow in the workplace to achieve a degree of eustress:

- Match a capable employee with an appropriate task: Managers should delegate tasks that fit the preparation and ability of the employee. As employees' ability improves in an area, they can then be delegated other tasks that are slightly more challenging. Thus, employees graduate to more difficult tasks;

- Define clearly the decision-making range of employees: This is done so that they can perform their tasks without having to keep checking with their superiors;

- Clarify the task: This can be done by reiterating the details of the assignment and asking employees for feedback on aspects that need clarification. Finally, establish a mutually acceptable deadline for completion of tasks;
- Practise active listening: This is based on empathy and trust, and showing of interest. If employees know that their manager or supervisor is listening, they are able to communicate better, and they trust that no barriers exist between them, and that they are not being judged, thus reducing stress levels; and
- Consider using empowerment: This helps to create a culture that stimulates employees to act in a committed, concerned and involved fashion in doing their job creatively (Douglas, 1996).

In addition, Ross & Altmeier (1997) suggest the following preventative strategies that could be employed in the organisation or taught at a stress management programme :

- cognitive appraisal: where employees are taught to assess the severity of the stressor and develop a new perspective on it;
- cognitive restructuring: showing employees how to move from and external locus of control (attributing the situation outcomes to environmental factors), to an internal locus of control (attributing the situation outcomes to internal / personal factors);
- cognitive rehearsal: helping people deal with the problem by anticipating them before they happen; and
- stress inoculation training: focus on the way employees are processing information about the stressful situation and identify cognitive and behavioural coping skills to change unproductive ways of reacting

2.5.3. Changing the Organisation to Reduce Stress

Bringing about a change in the organisation is easier said than done. According to Krohe (1999) it would not require a drastic and costly redesign of the structure of the organisation, but rather, a redesign of the structure of work. This would involve ridding the workplace of known sources of stressors, such as tight work schedules.

39

Even though employees might work less time with looser time schedules, the accomplishment and production of work would be of higher quality and quantity.

Management could also take a more proactive stance toward the work experience of their employees by providing for training, career development, succession planning, compensation and benefits, and dealing with affirmative action and diversity concerns. In addition, if management can analyse the link between employee development and stress, they may be able to alleviate employee stress to some extent. This can be done by providing for mentors to employees just entering the workplace or entering a new position so that learning opportunities are given. This will help to clarify any ambiguities and uncertainties the employee experiences. Training may facilitate confidence and improve work quality as well. Allowing employees to contribute to decisions affecting their jobs and the goals of the organisation also helps improve work quality. Furthermore, performance feedback and rewards may help to enhance motivation and reduce stress as they clarify the acceptable levels of job performance (Craig, 1991 and Ross & Altmeier, 1997).

Craig (1991) suggests that organisations also look at their physical environment to reduce stress. This includes ensuring:

- high standards of health and safety should be achieved, sustained and monitored;
- the layout of the production process should be tailored to the level of concentration needed;
- spacious, well lit and well ventilated surroundings;
- controlled noise levels;
- suitable equipment for the job;
- planned and frequent maintenance;
- ergonomically comfortable furniture;
- transport for working unsocial hours;
- flexible working hours to meet temporary needs of employees; and
- nursery facilities.

2.6. Coping

The aim of the research being conducted is to identify the sources and manifestations of stress. It also aims to see whether these stress levels in employees of Durban Metro Electricity could be reduced in some way after they have undergone a stress management programme. The aim of the programme is to aid employees in coping with their stress, hence attempting to reduce or alleviate stress. It is therefore important to consider some of the methods of coping, to understand how these are introduced and applied in the stress management programme.

Lazarus (in Stress and Coping, 1977) a leading theorist on stress states that people use a wide variety of coping processes, depending on personal characteristics, the nature of the environmental demands and contingencies and how these are appraised. For example, people who worry a great deal may resort to tranquilizers, and those who practice positive mental attitudes may seek support from their social circle or their family. Others may resort to meditation, psychotherapy, relaxation exercises, and yoga. However, these help people to deal with the symptoms of stress, not the causes.

He then goes on to suggest that an individual should make an effort to deal with the problem generating the stress. This could include attempting to take control of the emotion by appraising the personal and social demands of the situation and managing the emotional reactions willfully, rather than automatically or passively. The environment cannot be controlled, and as a result, the individual has to control how they interpret the environment.

This is supported by Maultsby and Hendricks (1974). They speak of establishing a rational view of emotion to reduce stress. They confirm that positive, rational thoughts about a situation or an object will result in positive and rational emotions. This in turn establishes an objective view of reality, thereby reducing stress.

Carver, Scheier and Weintraub (1989) define different types of coping methods:

2.6.1. Problem-focused Coping

Problem-focused coping includes active coping, suppression of competing activities, and seeking social support.

2.6.1.1. Active Coping

Active Coping is seen as the process of taking active steps in an attempt to remove or circumvent the stressor or to reduce its effects. This involves initiating direct action, increasing one's efforts, and trying to cope with the situation in a step-by-step manner (Carver, Scheier and Weintraub, 1989). However, even though an employee cannot change the situation of employment, they can change the way in which they react to it, and the way in which they perceive their abilities to overcome their problem. This ties in with Lazarus' (in Stress and Coping , 1977) theory that environmental demands interact with the coping dispositions and activities of the individual. It is up to the individual to control the way in which they react to environmental demands.

The concept of planning is also part of the active coping category. Carver et al (1989) see planning as thinking about how to cope with a stressor. This involves defining action strategies and thinking about what steps to take and how best to handle the problem. Such planning is seen to provide purpose and direction in addressing specific issues, and provides an opportunity to control and manage the conditions bringing about role stress.

This concept can be used in research to ascertain whether such an approach to coping does indeed reduce stress levels of employees, and whether training programs or EAP's allow for such a coping method and bring about such results.

2.6.1.2. Suppression of Competing Activities

The second type of problem-focused coping suggested by Carver, et al (1989) is that of suppression of competing activities. This refers to people's reactions to stressful events by putting other problems aside, and avoiding becoming distracted

42

by them, in order to deal with the main stressor. However, this strategy has not always been successful .

It would be interesting to find out through the research if employees are actually using such a method of coping, and whether or not they are successful in reducing their stress levels.

2.6.1.3. Seeking Social Support

Here people seek advice, assistance and information from others around them This could be to clarify environmental, social and career issues. This is different from seeking emotional support from family or friends. However, they can co-occur in situations (Carver et al 1989).

2.6.2. Emotion-focused coping

Emotion-focused coping includes acceptance, positive reinterpretation and growth, denial, focus on venting of emotions, mental disengagement, behavioural disengagement, and seeking social and emotional support.
Emotion-focused coping (Carver et al, 1989) is seeking emotional support from family and from oneself. The first method is:

2.6.2.1. Acceptance

Acceptance is seen as a functional coping response, where a person accepts the reality of a stressful situation through attempting to deal with the situation. In addition, Carver et al (1989) have defined the concepts of primary and secondary appraisal in association with acceptance. Primary appraisal occurs when a stressor is accepted as real. Secondary appraisal is when there is an acceptance of a current absence of active coping strategies.

However, the employee then has to be guided toward some sort of problem-focused coping such as active coping. Linked to this is the emotion-focused coping method of positive reinterpretation and growth.

2.6.2.2. Positive Reinterpretation and Growth

This entails initiating coping responses which focus on personal growth, and allowing the person to try to create positive meaning from the stressful situation. However, the focus here is aimed at coping methods in the attempt to manage distress emotions rather that dealing directly with the stressor (Carver et al, 1989).

2.6.2.3. Denial

Denial refers to a refusal to believe that the stressor exists, or trying to act as if it is not real. It is seen as a way of minimizing distress and helping the coping process. Others see the denial creating extra problems, as further adverse implications can occur later on in the stress event (Carver et al, 1989).

2.6.2.4. Focus on and Venting of Emotions

The coping method of focus on and venting of emotions looks at some peoples' tendency to focus on what is distressing them and then to ventilate those feelings. Although this method may have functional advantages to the person, it could also have an adverse effect by impeding their adjustment to the situation and it can reflect maladaptive coping (Carver et al, 1989).

2.6.2.5. Mental Disengagement

This refers to a person using a wide variety of activities to distract them from thinking about the stressful event, and the stressors of it. The person can then emotionally distance themselves from the issues or neglect their responsibilities toward it. Although disengaging can be an adaptive response, it can often impede adaptive coping. Thus, it may lower a person's emotional distress, but it can also reflect a lack of functional efforts to influence or deal with the stressors (Carver et al, 1989).

2.6.2.6. Behavioural Disengagement.

This involves the reduction of one's effort to deal with a stressor and an abandonment of the attempt to attain goals with which the stressor is interfering. The person could behave this way because of feelings of helplessness, and this may

44

also be a dysfunctional coping response (Donald, 1995).

Such methods of coping could be disadvantageous to employees as they may never come to terms with their problem, and therefore never take active steps to improve their situation.

2.6.2.7. Seeking Social (emotional) Support

This includes obtaining moral support, sympathy and / or understanding. Carver et al (1989) state that in some cases such support can be functional, as a person who feels insecure because of the stressful situation can be reassured by family or friends. This could lead toward problem-focused coping, but too much seeking of sympathy and attention could be dysfunctional as well.

However, in moderate amounts, personal / social support with positive personal relationships can provide care, protection, comfort, and emotional assistance.

Carver and Scheier (1989) have also drawn upon principles of cybernetic theory and applied them to their theories of stress and coping. Cybernetic theory provides a comprehensive understanding of the person-environment relationship. It emphasises time, information and feedback. Information mediates the person-environment relationship. Feedback recognises the coping behaviour is purposeful and directed by knowledge of its previous effects. It is also central to an understanding of stress. We can then say that an individual detects strain and then translates this knowledge into adjustment processes to cope with the situation. Hence, an individual's cognitive appraisal of the situation is key (Cummings & Cooper in Cooper, 2000).

Edwards (in Cooper, 2000) speaks of an integrative theory of stress, coping and well-being in an organisation. He sees stress, coping and well-being as critical elements of a negative feedback loop, in which discrepancies between environmental inputs and internal standards bring about stress. This damages well-being and stimulates coping attempts intended to resolve discrepancies between the

45

environment and standards.

There are three key constructs in Edward's (in Cooper, 2000) theory:

- Duration: This refers to the length of time of a person's awareness of a discrepancy, which is a necessary condition for the experience of psychological stress.
- Well-being: This is the psychological and physical health of a person.
- Coping: This refers to the efforts to prevent or reduce the negative effects of stress on well-being (not the successful implementation of the efforts). It involves a decision-making process in which coping strategies are selected and implemented. This ranges from a careful generation, evaluation and selection of coping strategies, to an intuitive coping response.

The above implies that an individual needs to have some control over their thoughts and actions to cope well in a stressful situation.

2.6.3. Control

The concept of control has been seen as a potential aid in physical health and well-being. It is also considered to be a factor that influences how the work environment is perceived and therefore helps to determine how an individual will appraise objective work conditions. Control is thus the ability to choose one's own actions from two or more options. The focus here is more on behavioural control, rather than cognitive. Behavioural control in the workplace ranges from autonomy (an individual's control over their own tasks), to participation in broader decision-making that might not affect the person directly. However, it must be emphasised that control over immediate and specific job stressors is important. Control can be divided into environmental control and perceived control. Environmental control refers to the degree of choice an individual is given. Perceived control is the amount of choice a person believes they have. If they do not perceive the control, they may not feel capable of using that control. As a result, control can function as a stressor as well (Spector, in Cooper, 2000).

However, if an individual can manage their personal initiative well by removing and preventing re-occurring problems, anticipating future demands and improving their all-round efficiency, they will be able to cope well. To take initiative, however, the individual needs intrinsic motivation, and the relevant skills and creativity to do the job. Their ability to exert control over their work, the availability of resources and supportive leadership are all positively related to coping (Fay, Sonnentag & Frese, in Cooper, 2000).

Lewis (1997) states that an individual can control their emotional stress by anticipating potentially stressful encounters before they occur, by using a stress reduction technique. He encourages stressed individuals to speak calmly, and not allow others to get them annoyed or angry. He also suggests breathing deeply and using positive imagery to calm down and control one's stress level.

According to the Brockhampton Reference guide on Understanding Stress (1996), self-help and self-control is a very positive form of stress management. This involves recognizing the existence and type of stress, and then taking remedial action. Identifying the root cause of the problem relives the current stress and prevents recurrences as well.

The actual methods of controlling stress and stressors shall be covered in the Stress Management Programme section.

2.6.4. Alternate Coping Methods
2.6.4.1. Meditation
According to Paul Wilson (1995 and 1997), Dr David Lewis (1997), and the Brockhampton Reference Guide to Understanding Stress (1996), the benefits of meditation are widely documented and accepted today. Meditation is increasingly being used as a creative and therapeutic exercise by many people in all walks of life. Meditation produces a state of deep relaxation. Once this state is achieved, all the physiological responses in the body are opposite to when an individual is in a

state of anxiety or anger (stressed). However, meditation requires concentration and single-mindedness, where the objective is to focus one's attention on just one thing at a time.

Wilson (1995) also advocates the technique of breathing meditation. This requires being aware of one's breathing to the exclusion of everything else. One should be able to visualise the air going through one's body. Then one may begin counting each breath and become aware only of the counting. The breathing will then slow down.

Linked to the above is mantra meditation. This involves repeating a single word of spiritual significance over and over again. Eventually, one will learn to pace every action one does, through learning the art of meditation. This is the "Calm Principle" that Wilson (1995) proposes: to do each action in a complete way. Each action should be done to the best of one's ability. All other distractions should be ignored, and all one's concentration should be focussed on that moment. This will direct any effort one makes into a more efficient and orderly fashion. It frees the mind of distractions and brings maximum effectiveness to each task that is performed. This "Calm Principle" can be applied to every aspect of one's life, ie: diet, exercise, attitude, work, and personal relationships.

2.6.4.2. Breathing

The concept of controlling stress by controlling breathing has been widely advocated in stress literature. David Lewis (1997) explains that stress causes an individual's rate and type of breathing to change. It may even cease temporarily, or become shallower. This may result in hyperventilation and an imbalance in ratio of carbon dioxide to oxygen in the blood. As a result, a stressed individual may experience a racing heartbeat, chest pains, dizziness, faintness, an inability to concentrate, and impaired intellectual and physical performance. To deal effectively with such a problem, Lewis (1997) maintains that one should consciously monitor their breathing during the day. They should keep checking their breathing and consciously slow it down. He advocates deep, rhythmical breathing to reduce feeling

stressed.

Wilson (1997) and Brownlee (2001) also encourage those who feel stressed to take a calm breath. They both states that breathing is a unique function in that it is the only involuntary physical activity one can have control over. Hence, when you control the way you breathe, you can influence your health, well-being, the way you think, and your overall state of mind. Through breath, an individual can take time to confront their negative emotions and possibly even find the root of their problem. By mastering their breathing, individuals can find a calm sanctuary even in the most stressful work environments.

2.6.5. Conclusion

It seems from the above that the maintenance of moderation and control in all behaviour is needed for an individual to cope well. In addition, the researcher finds that in the case of employees, it is important for them to obtain instrumental and emotional social support. An active problem-solving process also has to be planned and implemented to reduce their stress levels and increase their coping abilities. This research will focus on whether the company's stress management program provides access to such coping abilities and career skills and whether this helps to achieve the desired result.

2.7. An Organisational Approach to Stress Management

According to Quick, Quick & Nelson (in Cooper, 2000), it has been found that the core elements of the stress process in organisations are:

- organisational demands and stressors, which lead to
- the stress response, which results in
- eustressful or distressful situations

Hence, we can see that organisational demand and stressors are physical or psychological triggers for the stress response.

Beehr (in Cooper, 2000) suggests that organisations look at the stressors in the environment, focus on the psychological strain on the employee, and then recommend treatments that change something in the employee's organisational environment. If management do not think it very important to focus on stress management, employees should get together to elect or form a problem-solving committee who identify and analyse potential organisational stressors and recommends changes to management. If this is not resolved, stress levels may rocket and efficiency and productivity in the organisation may plummet.

Quick, Quick & Nelson (in Cooper, 2000) then go on to generate different hypotheses based on the above:

- intense, frequent, prolonged organisational demands increase the stress response in people at work;
- intense, frequent, prolonged elicitation of stress response increases the risk and incidence rates of distressful health consequences;
- individuals high in vulnerability are at greater risk of distress;
- primary prevention interventions (which protect health at the stage of susceptibility by reducing or eliminating the impact of health risks) reduce the stress response of people at work
- secondary prevention interventions (includes early detection of disease and early and immediate intervention to correct ill health) moderate individuals stress responses and reduces the intensity, frequency and / or duration of the individual experience of the stress response; and
- tertiary prevention interventions (therapeutic measures which are designed to treat symptoms or advanced diseases to alleviate discomfort and to restore function) minimize distress and provide therapy, and shorten and improve the healing process in stressful or traumatic events in organisations.

The above hypotheses are beneficial to future research. It is important to look at which are most effective in reducing organisational and individual stress. Organisations can even look at how they can best structure themselves to undertake preventive management measures to deal with stress.

Many organisations prefer to take a proactive stance and implement stress management programmes to attempt to alleviate or prevent high stress levels. Any effective approach to stress management should, however, be integrated into the organisational processes and become part of the daily routine (Sutherland & Cooper, 2000).

In the past, stress management activities were focussed on the individual in the workplace and blame was placed on the person who is seen to be having the problem. The idea then, was that the person should change. The flaw in this ideology is that many different factors contribute to an individual's stress, and the work environment is a large factor. Hence, the quality of work life, the dynamics of interpersonal relationships, and the organisational structure and climate all shape the working environment. As a result, a holistic intervention is required (Sutherland & Cooper, 2000). Further stress factors could be the environmental issues impacting on the organisation at large, such as downsizing, restructuring, and affirmative action and employment equity legislation in South Africa. Many employees feel the threat of losing their jobs to other people from designated groups. Such severe stress can cause a decline in health.

Organisations can provide for this by implementing preventative interventions that aim to stop, slow or reverse the progression of disease. Primary, secondary and tertiary prevention can attempt to do this (Quick, Quick & Nelson, in Cooper, 2000).

A further intervention could be an organisational stress diagnosis or stress audit.

2.7.1. Stress Audit

Sutherland & Cooper (2000) speak of controlling stress at an organisational and individual level. However, this can only be done successfully if the employees are consulted on their need for certain stress control methods and if an assessment of the potential usefulness and benefits of the intervention are done.
Questions that need to be asked are:
■   does a potential problem exist?

- can the cause of the problem be identified? Is it stress-related?
- who is affected?
- what do employees need to overcome the (potential) problem?

A stress audit is beneficial as it is a diagnostic instrument that is proactive in nature. It aims to identify the organisational and individual strengths and weaknesses in a similar way to that of a needs analysis. It draws on a variety of diagnostic measures such as interviews, questionnaires and observational techniques, stress logs / diaries, group discussion sessions and one-to-one sessions (Sutherland & Cooper, 2000, and Quick, Quick & Nelson, in Cooper, 2000).

From a stress audit, the target and strategy of a stress management programme can be identified and designed. An approach can be decided upon ie: whether to use primary, secondary or tertiary prevention interventions, and how to implement these in the stress management programme and organisation-wide. A stress audit also provides a baseline measure from which to evaluate subsequent interventions, and most importantly, it helps to make stress a respectable topic for discussion in the workplace (Sutherland & Cooper, 2000).

2.7.2. Stress Management Interventions (Organisational)

As mentioned above, Quick, Quick and Nelson (in Cooper, 2000), the International Labour Organisation (2001) and Sutherland & Cooper (2000) look at three different levels of stress control:

- Primary level intervention: Identifying and eliminating / minimizing stressful situations. This is stressor directed and is aimed at addressing and preventing stressors in the workplace.
- Secondary level intervention: Teaching the individual to cope with stress. This is response directed and aims to develop stress resistance and adaptive coping strategies through education and training.
- Tertiary level intervention: Helping those who have become victims of long-term exposure to stress. This intervention is symptom directed to help cure

and rehabilitate stressed employees.

Within each level, the focus can be directed at an individual, team or organisational level.

2.7.2.1. Primary level interventions

To identify and / or prevent stressful situations, certain changes need to be made in the macro- and micro-environment of an organisation:

Changes in the macro environment include:

- ensuring the culture of the organisation expresses a supportive and open climate. This type of culture has to be built gradually, ensuring the style of management is compatible with the goals of the organisation. In addition, the culture should encourage staff to be supportive of each other through facilitation of teamwork, which in turn aids good interpersonal relationships. This is an effective form of stress reduction;
- re-analysing stressors such as work overload and redesigning staffing levels and job design;
- educating employees about safety measures and the nature of the risk involved with each job. This may help overcome fears and also prevent critical situations from arising as employees will be able to recognise unsafe or dangerous situations. It is also important to know how safe employees feel about the potential risks they face, and to ensure that they have a realistic and healthy perception of the risk in the workplace;
- lack of job security or limited potential for future career development is demotivating, frustrating and stressful. Employees expect recognition and advancement for their hard work. It is therefore important to provide realistic and honest job descriptions, have regular performance appraisals, offer individual counselling, interview skills courses, and access to job placement services, and / or provide training opportunities;

(Quick, Quick and Nelson in Cooper, 2000, the International Labour Organisation, 2001, and Sutherland & Cooper 2000).

Changes in the micro environment that should be undertaken are:

- areas of work underload should be identified, as understimulation and boredom can lead to stress. Hence, a variety of skilled tasks should be designed for such jobs. In addition, tasks should be designed such that an employee can see them trough from beginning to end. These tasks may then provide autonomy to the employees, and they can see the significance of the task (ie: its impact on themselves and others). Job rotation is another option. If this is not viable, then horizontal job enlargement can be implemented, where an employee gets additional tasks to do so that there is variety and diversity in the work he or she does. Vertical loading refers to the addition of more and more challenging duties to the job, such as more decision-making responsibility;

- role clarification interventions may include workshops in which responsibilities are charted, and rules, policies and roles are clarified;

- increasing worker participation in decision-making helps to reduce employee stress as they feel as if they have more control over their work situation. Self-managed teams have proved to be better at identifying new ways of improving productivity, and are more motivated;

(Quick, Quick and Nelson in Cooper, 2000, the International Labour Organisation, 2001, and Sutherland & Cooper 2000).

2.7.2.2. Secondary Level Interventions

Although studies show that organisational stress control and prevention interventions are more effective than individual-level coping strategies due to their lasting effects, prevention of all sources of negative stress is not possible. Hence the effects of exposure to stress could be minimized by the use of techniques aimed at increasing coping processes by the individual. Therefore, secondary prevention is the prompt detection and management of potentially harmful conditions by improving stress management skills and increasing self-awareness.

Individuals could be taught to plan ahead, develop realistic aspirations, learn anger management, relaxation methods (physical and mental) and healthy exercise and

diet habits. Stress management skills aimed at changing employees' behaviour could also be taught. These include helping to change certain stress inducing behaviours at work, building social support networks at home and at work, being more assertive, learning how to identify stress and recognize it in oneself, and forming a personal action plan (Sutherland & Cooper, 2000).

Programmes that help individuals to deal and cope with stress may not address the problem at the source. They are therefore described as being more reactive than proactive in nature. This is because they are designed to cure the symptoms of stress, rather than prevent stress from occurring. However, evidence shows that although such programmes may be effective in the short term, they do not often have a lasting effect. The most effective programme would include a certain amount of organisational change (International Labour Organisation, 2001).

Maitland (2001) agrees with this. She states that the most useful approach to stress prevention and stress reduction is job redesign, where workloads are assessed and reduced, and employees are given greater control and their roles are made clearer. The European Agency for Safety and Health at work (2001) agrees with this. Their report states that job redesign and organisational change are the preferred approaches to stress management as they focus on reducing and eliminating the sources of the problem. However, these are expensive and difficult to design, implement and evaluate. To counteract these obstacles, it is suggested that a worker-management stress reduction committee be established to review and prioritise the identified sources of stress, plan organisational interventions intended to address them, and present them to top management.

Another effective method for stress prevention according to the International Labour Organisation (2001) is to develop a manual on stress prevention, adapted to a specific sector, occupation or organisation. This can help all employees to understand, analyse and combat stress in the workplace.

2.7.2.3. Tertiary Level Interventions

These include counselling services, EAP's, training and social support.

Counselling services allow for employees to deal with personal and work-related problems. This may aid in their mental health and self-esteem, but studies show that no improvement in job satisfaction or organisational commitment occurs. The International Labour Organisation (2001) states in its report that counselling indicates a failure to control work-related stress. Counselling should only be part of a stress policy, as a support function to people who have already been affected. However, the focus should mostly be on prevention, and counselling should form only a small part of the holistic strategy to avoid and control stress.

EAP's on the other hand offer a preventative approach to stress management. EAP's that are well managed can function at a primary level if the main sources of stress are reported to management in a confidential manner. Therefore, the sources of stress identified by the counsellors can be tackled directly at an organisational level. This can be further facilitated by training supervisors and managers in basic counselling skills, so that communication with their staff is easier. Social support between colleagues also helps to moderate the effects of job stress (Sutherland & Cooper, 2000, International Labour Organisation, 2001).

2.8. The Stress Management Programme (SMP) at Durban Metro Electricity (DME)

The SMP is a popular way to address the problem of stress within organisations. DME took this approach as well.

According to Everly (1990) there are five components of an effective SMP:
(i)   Explaining what stress is;
(ii)   Explaining the personal health and performance implications for eustress (positive stress) and distress (negative stress);
(iii)   Providing a method for identifying personal symptoms of excessive stress;

and

(iv)   Providing an explanation of and practice in various stress-management techniques.

SMPs usually focus on training people to control the symptoms of stress, such as teaching them meditation and muscle relaxation (Newton, 1995). This may help to reduce the symptoms of the emotional stress reactions experienced by employees to some extent.

The Training Officer currently conducting the Stress Management Course run at DME states that it is a generically formulated one. This means that there is no specific theory that it adheres to. The course was constructed using literature that cited general techniques for coping with stress, and that advocates practical, easy to implement techniques for individuals to deal with stress in their daily lives. In addition, this SMP is one that is run quite often throughout the year at the Durban Metro Corporate Headquarters. Hence, all the different service units (such as the Durban Metro Police, Durban Metro Water, the Housing Department, and Parks and Gardens Maintenance) have also been exposed to this particular SMP. It is therefore, not an SMP that has been specifically formulated for the Durban Metro Electricity Service Unit.

2.8.1. DME's SMP consisted of the following structure and content:

[1]   an introduction to stress
[2]   a stress quiz / test
[3]   a definition and group discussion of stress
[4]   a model of stress
[5]   a discussion on burnout and its symptoms, as well as a self-evaluation questionnaire to diagnose burnout
[6]   a discussion on identifying the sources of stress, and group work to identify work and personal stress
[7]   a video on coping oneself

[8] a discussion and identification of Type A and Type B behaviour, followed by a behaviour quiz to evaluate oneself

[9] time management tips and discussion of an example of poor time management

[10] stress reduction and coping skills were discussed, such as :

■ the value of breathing, learning to breathe correctly, breathing and stretching exercises, breathing meditation,

■ good eating habits and healthy diets, and exercise (how much do you need?)

■ positive self-awareness, positive self-esteem, positive self-control, positive self-image, and positive self-expectancy,

■ stressful situation analysis

■ meditation

■ imagery exercises and progressive relaxation techniques

■ tension-level self-evaluation test

■ quiz / self-evaluation questionnaire on how balanced one's life is

■ suggestion on what actions to take and what to avoid when stressed, and what attitudes to adopt and avoid

■ discussion of a range of options available to cope effectively, such as : altering the stressor, avoiding the stressor, adapting to the stressor, taking action, controlling the physical stress response, utilizing available coping resources (social support, community services, religion)

■ a brief look at fifty ways to reduce stress

■ a brief look at the physical stress response

[11] Self-assessment questionnaire on identifying personal symptoms off stress

[12] Discussion of the stress danger signals and the physical reactions that occur within the body when faced with a stressful situation, ie: the "Fight or Flight Syndrome"

(See Appendix E-1)

2.8.2. Theoretical Approach of DME's SMP

Since no specific theory has been alluded to in the construction of the SMP, the researcher has attempted to draw parallels with the literature available.

It seems as if the SMP at DME agrees with Lazarus' (in Palmer & Dryden, 1996 and Palmer, 2001) theoretical rationale for stress management. Lazarus (in Palmer & Dryden, 1996, and Palmer, 2001) states that the entire range of human personality can be included within seven specific modalities :

[1]   behaviour

[2]   affect

[3]   sensation

[4]   biology / drugs

[5]   imagery

[6]   cognition

[7]   interpersonal

This is known as BASIC ID. Each modality can be thoroughly assessed to gain an idea of the interaction between them, and to apply suitable interventions as a result. This approach is excellent for individual counselling sessions for stress management. However, the interventions can be taught in a stress management programme setting for individuals to carry out themselves.

[1]   Behaviour : an individual needs to explore what is preventing them from being happy. They also need to look at what is holding them back from doing the things they would like to do, or they want to do and explore how their behaviour affects their relationships with others.

Behavioural rehearsal requires an individual to explore their problem (possibly with a counsellor), and decide upon the most suitable behaviour for that particular situation. The counsellor may then take on the role of a significant other in the problematic situation and helps to bring forward unforseen problems or difficulties. If a counsellor is not used, the individual may have to reflect objectively on the

59

situation to determine any unforseen problems and then work with those. However, it is best for them to get a neutral party to help them in this process (Lazarus in Palmer & Dryden, 1996, and Palmer, 2001).

The empty-chair technique requires an individual to face an empty chair, pretend that it contains the person that they have unfinished business with, and say exactly what they think or feel. They then swop places, and sit in the empty chair, attempting to be the person in question, and try to respond to the situation from their point of view. This helps people to get an insight into others' thoughts and is quite effective in bringing about solutions to problems (Lazarus in Palmer & Dryden, 1996).

The stability zones and routines intervention encourages individuals to develop adaptive routines which help them relax and unwind, such as : a morning cup of tea, walking the dog, hobbies, week-end breaks, holidays, or reading books. This helps the individual by bringing more control over their life again (instead of them allowing work to control their life). They may start to enjoy life's small pleasures once again (Lazarus in Palmer & Dryden, 1996, and Palmer, 2001).

The step-out-of-character technique encourages the individual to look at which behaviours are lacking or seldom used in their interaction with others, which may be worthwhile or beneficial. They are then encouraged to begin gradually practising such behaviours until they do not cause anxiety. For example, a person who rushes all the time may need to consciously slow down they way of life, even if they do not enjoy doing things at a slower pace (Lazarus in Palmer & Dryden, 1996, and Palmer, 2001).

Time management skills are also important to have, as many people are stressed due to lack of time management. If an individual often lets others interfere with their work schedule, they may have a non-assertive personality. Hence, they may need counselling to help them deal with becoming more assertive and managing others more effectively. The stress management programme however, gave them tips on how to approach work in a methodical manner and to prioritise daily tasks. An

emphasised point in the SMP was 'getting organised'. This focussed on keeping a control over what one is doing (Lazarus in Palmer & Dryden, 1996, Brockhampton Reference, 1996, and Palmer, 2001).

This point was carried further by Wilson (1997), who emphasises that control over one's time is crucial to bringing rewards into one's life. He suggests that one should start working as soon as possible on a dreaded task so that the time needed to work on it starts to decline. He also states that procrastination is the most debilitating time-related practice, and the most difficult to remedy. In addition, postponing the unenjoyable tasks for last has a negative effect on productivity, self-esteem and stress levels. This is because events control you, not vice versa.

Wilson (1997) then goes on to suggest that one should make their own deadlines before the actual deadline is due. This helps one to complete the task beforehand, whilst avoiding the stress of a looming deadline. Further, he mentions techniques to avoid procrastination. These are:

- dividing large tasks into smaller ones, so that they are easier to accomplish
- write the tasks down so that they are tangible
- prioritise the tasks
- allocate time for each task
- begin with the part one enjoys the least
- see the task as a game to be won
- document the rewards for inspiration
- apply one hundred percent effort

Dr Kent Yamauchi (1986) suggests getting organised as well. He states that one should develop a realistic schedule of daily activities that includes time for work, sleep, relationships and recreation. A daily "to do" list is also useful in reducing time urgency. If one constantly worries about time and is constantly in a rush to get things done, it helps to plan a schedule ahead of time and practice the notion of pace.

In support of the above, Dr. J. Hurd (1996) proposes the following essential

61

principles of stress management at work:

- one should take on new tasks only when one is confident that one can manage the old ones reasonably well.

- when feeling pressurised, one should not act blindly. Looking at the situation objectively and doing one's best is important to control stress.

- prioritizing one's tasks so that they are ranked according to importance in both, one's professional and personal life, helps to reduce feeling pressured. It also improves one's time management skills/

- one should train oneself to adopt a daily policy of optimistic realism, ie: to see the positive facts and focus on them, rather than the negative ones.

[2]   Affect (Emotion) : individuals need to explore and identify what makes them laugh, cry, get angry, anxious, sad, depressed or guilty. They also need to check if they have persistently recurring negative emotions. Once these are identified, they can embark upon an intervention to deal with the situation.

The SMP conducted at DME was (according to the Training Officer who conducts the course) also partly based on information from a book by Maultsby and Hendricks (1974). The book is titled "You and Your Emotions". It approaches the topic of stress by looking at the emotions people experience that cause their stress. The main focus of the book is to teach individuals to take a rational view of their emotions. This approach states that an emotion begins when an individual perceives (sees, hears, feels, tastes, touches or smells) something. They then believe something about their perception, followed by a gut feeling caused by their thoughts. Hence, their thoughts affect the way they feel. If they have positive thoughts about an object, they will feel positively about it. If negative thoughts are involved, then negative feelings emerge as well.

Dr. Yamauchi (1986) also promotes the idea of approaching situations in realistic and reasonable ways. He suggests dealing with stress by modifying our over-reactions to situations. The following suggestions are designed to reduce stress:

- learning to relax : this can be done by taking minibreaks, breathing deeply,

and relaxing one's muscles to relieve stress.

- practicing acceptance : if one accepts things that cannot be changed, such as someone else's feelings or beliefs, one may be able to control their stress more effectively.

- talking rationally to oneself : ask oneself what the real impact of the situation is, and whether the impact will be the same in a week or a month's time.

Hurd (1996) suggests regular introspection when encountering a dilemma. In addition, discussion of the problem with a friend is useful in expressing the feelings one experiences, and who may provide an objective view of the situation.

It can be concluded then that facts and events do not cause feelings / emotions. Thoughts about the fact or event do. By thinking a certain way, an individual chooses how they feel about something. Actions usually follow these feelings. If an individual has negative and irrational thoughts and emotions, this could lead to stress (Maultsby and Hendricks, 1974).

Maultsby and Hendricks (1974) then go on to suggest five criteria for rational thinking and behaviour:

[1] rational thinking helps you look at the objective reality of the situation / object

[2] rational thinking leads you to protect your life (ie: reduce stress)

[3] rational thinking helps you to get what you want quickly

[4] rational thinking keeps you from feeling the way you don't want to feel (stressed)

[5] rational thinking keeps you away from negative situations

As a result, an individual can make themselves feel better if they look at their thoughts objectively, determine if their thoughts make sense or not, and then change their negative, irrational thoughts to rational thoughts.

The SMP at DME used this explanation. It expanded on this by explaining how to rationally self-analyse an event. This is done by separating the event into:

- its objective facts

- one's own thoughts, attitudes and beliefs about the facts

63

- one's own emotional response to them

An individual can then practice this technique in every situation they are faced with that causes stress to them (Maultsby and Hendricks, 1974).

Maultsby and Hendricks (1974) also suggest Rational Emotive Imagery for stress reduction. This comprises of :
- identifying the situation that causes the stress
- relaxing one's body by sitting or lying down
- picturing oneself back in the stressful situation, but thinking only of rational challenges
- consciously calming oneself
- picturing oneself acting in a rational way that one would like to act in the future

The idea is to get rid of the self-defeating beliefs an individual has about themselves to make them aware of how they can improve their situation. It also helps to make them aware of the fact that they alone cause their emotional feelings, and they alone are responsible for the stress that they feel.

[3]   Sensation : individuals need to identify what it is that they like and dislike to see, smell, touch, hear and taste. More importantly, they need to establish what unpleasant sensations they suffer from (eg: back-pain, lightheadedness). They then need to explore how these sensations affect their emotions. To deal with stress from a sensory perspective, different relaxation techniques can be used.

The multimodal relaxation technique takes a minimum of eight minutes to do and can be extended upto thirty minutes if necessary. This method was taught in the stress management programme at DME. It consisted of the SMP trainer taking the delegates through the steps of imagining and feeling the different parts of their bodies relax. The delegates follow whatever the trainer says whilst their eyes are closed. They become aware of their breathing and they begin to relax as they move

from one part of the body to another. This exercise is good for anxiety, tension headaches, high blood pressure, migraines, and colitis, amongst other things (Lazarus in Palmer & Dryden, 1996, and Palmer, 2001).

The progressive relaxation technique was also taught at the stress management programme at DME. This technique teaches individuals to tense different muscle groups for approximately six seconds each, and then to relax them for a longer period. This is also useful for physically tense people, those with general anxiety, stress, asthma and hypertension (Fontana, 1990; Lazarus in Palmer & Dryden, 1996; and Tyrer, 1990).

The transcendental meditation technique was also included as an intervention at the stress management programme at DME. Here, the individual has to focus on a secret mantra or word and repeat it over and over whilst seated comfortably (Lazarus in Palmer & Dryden, 1996). According to Fontana (1990), meditation helps to train the attention as it focuses our thoughts, increase control over thought processes, increase the ability to handle emotions, and aid physical relaxation. He considers it to be one of the most helpful psychological techniques available to develop the resources needed to counter stress. It also helps to control breathing that becomes disrupted and irregular when an individual gets excited due to stress.

[4]   Imagery: individuals should identify how they see themselves, ie: what is their self-image like? They should also try to identify images around them that they like and dislike. The images may be examined by the individuals themselves to determine how the images affect their emotions, behaviour, thoughts, health and relationships. Furthermore, individuals may be asked to picture themselves in the immediate future, as well as in two to five years' time. They can then work out a plan of action to achieve their dreams in a reasonable amount of time, thereby reducing stress.

According to Lazarus (in Palmer & Dryden, 1996), if individuals cannot see themselves coping with stressful situations, they are less able to deal with these

65

situations in reality. This may lead to lowered self-confidence, negative emotions, and hence, depression. Such an individual therefore needs to be taught to visualize each scene in the coping process / situation.

Positive imagery includes picturing any scene that the client finds pleasant. This helps to reduce anxiety and lower tension levels. Such a technique is indicated for individuals who need a simple method of stress reduction, or a basic relaxation technique (Lazarus in Palmer & Dryden, 1996, and Palmer, 2001).

Rational-emotive imagery requires an individual to imagine an upsetting scene. They are then asked to describe how they feel about it. If, for example, they say they feel guilty and the guilt is causing the stress, then they will be asked to continue picturing the scene, but to change the feelings of guilt to feelings of regret. Hence, they are asked to change an irrational belief to a rational one. If they are able to do it, they are asked how it was done. This then proves to the individual themselves that they can deal with the situation even if they are feeling distressed (Lazarus in Palmer & Dryden, 1996).

[5]   Cognition: individuals should be encouraged to look into what they believe their main interests, values and beliefs are, and what they regard as important. They can also look at how their thoughts affect their emotions, imagery, behaviour and relationships. If the cognition / thoughts are misdirected and are causing stress, this can be rectified (Lazarus in Palmer & Dryden, 1996).

The Brockhamptom Reference guide to Understanding Stress (1996) encourages stressed individuals to change their thinking. This can be done in two ways: reframing, and positive thinking. Reframing involves looking at the same stressful situation from many different angles and interpreting it in different ways. Positive thinking involves focussing on the strengths and opportunities in the stressful situation. Both these methods help individuals to gain an objective view of the situation and hence, reduce their emotional stress.

[6]   Interpersonal: individuals should be encouraged to analyse their expectations of others, as well as what they believe others expect of them. They need to look at which people they consider to be important in their lives, and determine how these people affect their thoughts, behaviour, emotions and relationships.

Even though this can be discussed at a stress management programme level, it is more appropriate for a counsellor to coach the individual experiencing severe problems in this area.

Assertiveness training involves identifying unhelpful messages that an individual may project, and replacing them with clearer, well-projected ones through rehearsal and experimentation. However, the difference between assertiveness and aggressiveness must be made (Lazarus, in Palmer & Dryden, 1996; and Ross & Altmeier, 1997).

Communication skills training involves sending and receiving messages in a clear manner. It aids in reducing tension and interpersonal conflict (Lazarus, in Palmer & Dryden, 1996; and Ross & Altmeier, 1997).

Yamauchi (1986) says talking to friends is a useful way to relieve stress. Consistent and amiable relationships with friends and daily doses of conversation to share deep feelings and thoughts are beneficial in helping individuals cope with stress.

Problem-solving skills training is a method of dealing with problems that require a practical solution and a step-by-step approach in attaining it. This involves:
- problem identification
- goal selection
- generation of alternatives
- consideration of consequences
- decision-making
- implementation

- evaluation

Once this method has been taught, the individual can use it to prevent future situations from becoming overwhelming (Palmer & Dryden, 1996; and Tyrer, 1990).

[7]   Drugs/Biology: this modality encourages an individual to analyse what worries they have about their health, what type of drugs they take, and whether they are interested in improving their general health. This type of reflection can also help to improve an individual's stress levels as they can embark on a positive course of action once they have identified any harmful factors affecting their health.

Useful interventions for the above would be nicotine and caffeine reduction programmes. These use techniques for gradual cessation of the stimulants so as not to shock the Central Nervous System (Lazarus, in Palmer & Dryden, 1996). The SMP at DME did not include such interventions, but the dangers of unhealthy and harmful habits were discussed.

Regular exercise is also seen as a good intervention to reduce the chance of coronary heart disease and help in stress management as it aids general physiological and psychological health. It may also aid in releasing aggression and reducing cognitive distraction. Exercise helps individuals discharge and channel their energy and helps them forget the frustrations and pressures that geared up the body in the first place. Linked to this is following a good nutrition plan to keep health at an optimum level. Poor diets may result in illness, heart disease, digestive disorders and obesity. Hence weight reduction and control programmes may be needed for individuals to reduce physical and psychological stress (Fontana, 1990; Lazarus, in Palmer & Dryden, 1996; Brockhampton Reference, 1996, and Tyrer, 1990). Yamauchi (1986) also emphasises that exercise or any physical activity has always provided relief from the effects of stress. He also states thateating sensibly, ie: a balanced diet provides all the nutritional needs and all the energy needed by the body. The SMP at DME does focus a good deal on exercise and diet as it aims to bring about a change in lifestyle of the delegates attending.

68

2.8.3. Conclusion

The above method of identifying specific modalities in dealing with stress is quite helpful, as often, individuals may claim that they are stressed, but have no idea of the specific cause(s) of the stress. Working with the different modalities will help individuals define their emotions, thoughts and behaviour, and ease their difficulty in exploring and expressing issues. However, Palmer and Dryden (1996) warn that this method may not always work as individual's perception of their stress may be different to reality. Nevertheless, this does provide a guide to help in stress reduction.

2.9. Suggestions for an Effective Stress Management Programme

2.9.1. Stress Management Courses Aimed at Different Levels of Employees

According to Palmer (2001), organisations should ideally have three different levels of stress management course. Each course should be aimed at distinct levels within the organisation. The levels should be categorised as following:

- Directors / Senior Management
- Front line staff
- Middle Managers

In addition, each course should provide the following:

- tools, knowledge and motivation to pursue solutions to stress
- a challenge to individual's natural resistance to change
- encouragement for employees to make changes to unproductive work habits
- a feeling of confidence and competency in using the new techniques consistently for a minimum of twenty-one days
- education about what causes stress
- help in improving the levels of communication throughout the organisation
- clear support of senior management
- clear objectives and levels of evaluation to both individuals and the organisation on attitudes, skill levels and performance (Palmer, 2000).

He emphasises that not many people can learn from a one or two day course. For any learning programme to be successful, the trainees should be left with a programme of change which they can use at home and at work. They can therefore build good habits on a daily basis. However, to do this, the trainers need to understand the culture of the organisation and attend to the specific issues that cause stress. In addition, employees should be motivated to follow through practising the abovementioned good habits, and need to be disciplined in their efforts.

Palmer (2001) then goes on to distinguish the differences in the stress management programmes for Senior Management, and for Managers and front line staff:

- Senior Management need to understand the meaning of stress, its causes, reactions and manifestations, before they are shown statistics that help them investigate and evaluate the cost and long-term implications of stress to the organisation. They also need to have a brainstorming session to identify where stress is most prevalent in the organisation. Thereafter, from role plays, group discussions and workshops, they can develop strategies for combatting the causes of their own stress (including time management, communication, assertiveness, strategic decision making, delegation, development and counselling skills). They may even draft their own personal coping strategy.
- For Managers and front line staff, the programme should focus on recognising and controlling work stress, learning specific techniques to reduce their effects, and also, recognising stress in others. The latter part will include learning skills that help teams to function better, as well as good communication, listening and counselling skills.

2.9.2. Team Work and Increased Autonomy for Stress Reduction

In support of the above, it has been emphasised by Bennet (1994) that skills to improve team effectiveness are important for stress management. Teams are groups of employees who work together in order to achieve group objectives. Team members are ideally interdependent and each person in the team has an important

role to play in achieving the team goal via communicating and listening to their team members. It is essential to determine why they are not functioning effectively and what the cause of their stress is.

Senge (1990) says that managers have a responsibility in enhancing and improving the organisation and its employees' capacity for learning more and doing more. According to Hollway (1997) organisational culture has shifted recently toward allowing the individual employee lower down in the hierarchy to take more responsibility and initiative. Decisions taken correctly at these levels would result in a quicker response to the market, more flexibility, and therefore a more competitive organisation. In addition, the stress levels of Senior Management that rise with increasing responsibility is now reduced. Further, employees with more decision-making authority in their jobs tend to be less stressed.

2.9.3. A Multidimensional Model for Stress Management

Everly (1990) states that it is important to use a Multidimensional Model for Stress Management so as to allow the individual a variety of techniques and resources to draw upon when dealing with stress :

(I)   Helping the individual develop strategies by which to avoid, minimize or modify exposure to stressors and to reduce the tendency to experience the stress response.

Time-management training;

Assertiveness training;

Communications;

Hostility-management;

Management-by-objectives;

Practice in rational thinking and cognitive restructuring; and

Diet.

(II)   Helping the individual develop skills in relaxation, thereby inhibiting the stress response.

Deep breathing exercises;

Meditation;

Biofeedback;

Progressive relaxation;

Coping with anxiety; and

Mental imagery.

(II)   Helping the individual develop techniques for healthy expression of the stress

response.

Physical exercise; and

Emotional catharsis (ie: counselling)

(III)   Organisational Development.

Such a multidimentional model is important as it encapsulates strategies for individuals to develop particular skills to deal with job stress. SMPs usually focus on training people to control the symptoms of stress, such as teaching them meditation and muscle relaxation (Newton, 1995). This may help to reduce the symptoms of the emotional stress reactions experienced by employees to some extent.

2.9.4. Stress Inoculation Training

A more holistic approach is that of stress inoculation, proposed by Meichenbaum (1985). This also focuses on the development of skills to enable individuals to deal with and to diffuse stressful situations at work. It provides individuals with a conceptual framework by which to understand stress by helping them to develop cognitive and behavioural skills which are effective in dealing with stress.

Stress inoculation training also consists of relaxation training, but in addition to this, it comprises components of problem solving, cognitive strategies and self-instructional training.

Relaxation training teaches workers how to relax by tensing and releasing muscle

groups and by meditating as well. There is also an encouragement of physical exercise to bring about relaxation. This may help employees who experience the physical symptoms of stress such as feeling tired and tense. However, it is crucial for workers to see the benefit of exercise and meditation, and for them to commit themselves to doing them. Practice is needed to hone this skill, and the worker must realise that advancement in coping levels is a gradual process. It is important, therefore for the organisation to provide resources or a support system that workers can turn to when feeling demotivated or disillusioned with the relaxation techniques (Meichenbaum, 1985). Workers should be able to discuss any problems they might have in carrying out their exercises with a counsellor or stress management trainer. There are various cognitive strategies used in stress inoculation training. Three main strategies are: cognitive restructuring, problem solving and self-instructional training (Meichenbaum, 1985).

Problem-solving strategies help to train workers to realise that they can rely on their own problem-solving capabilities. A strategy might include asking workers what advice they would have for someone else in a similar stressful situation. Once individuals realise that they can draw upon their own problem solving resources, they can begin to look at stressors as problems that can be solved rather than problems that pose as a threat to them. This may improve employees' confidence in themselves. Meichenbaum (1985) also suggests that the trainer complement such a technique by having role-playing sessions, communication sessions and time-management skills sessions, as well as workshops on how to set priorities and clarify values. This helps to further equip the worker when solving problems.

Self-instructural training is an intervention that teaches workers to deal with stressors themselves in the workplace. It is also designed to engender a problem-solving attitude and specific cognitive strategies that workers can use in their stress response.

Self-instructural training includes:

- Assessing the demands of a situation and planning for future stressors;
- Controlling negative, self-defeating, stress-endangering thoughts, images and feelings;
- Acknowledging, using and relabelling the stress felt;
- Coping with the emotions that are experienced when faced with a stressor;
- 'Psyching' themselves up to confront the stressful situation; and
- Reflecting upon their performance and reinforcing themselves for attempting to cope.

From the above points, it can be seen that it is important for workers to develop a variety of intrapersonal and interpersonal coping skills. This helps in achieving the goal of Stress Inoculation Training (SIT) which is to help individuals adapt and to respond to stress positively. This facilitates better mental health and psychological well-being.

2.9.5. Developing a Stress Management and Relaxation Centre for the Worksite

Dr E. A. Randolfi (1997) has put forth an innovative suggestion. He speaks of a permanent stress management and relaxation centre within the confines of the organisation. This would be similar to a fitness centre, where employees are provided with an area, equipment and qualified staff to encourage stress awareness, and to help employees learn stress management and relaxation techniques.

This centre may be used by employers to address organisational factors that contribute to workplace stress, or it may be used to teach coping skills to employees. It may even be used to offer rehabilitation services for stress related illnesses. This flexible approach has been taken, as employers are beginning to realise that stress is not experienced or perceived in the same way by all employees. Hence, each employee may need to be taught coping techniques that are appropriate for and specific to themselves. He also explains that many employees also feel stressed by factors outside the workplace. Hence, they need a broad-based individual stress reduction programme to help them deal with a host of stress related causes and

outcomes (Randolfi, 1986).

With such a centre available, employees may make appointments for individual consultation with the centre's co-ordinator. The co-ordinator will then identify which techniques may be most useful for that specific employee. The centre may be situated within an EAP or a medical facility at the worksite. Alternate methods of stress reduction may also be offered, such as yoga and meditation classes (Randolfi, 1986).

If it proves too expensive to have a full staff complement at the centre, the organisation can still make a start by establishing a lending library of relevant texts, instructional video and audio casettes, and self-help books for employees to peruse. The main aim of such a centre is to allow employees to experience a variety of stress management techniques, and to develop competence in one or more techniques (Randolfi, 1986).

From the above, we can note that a stress management programme is more effective if it is aimed at a particular level of employees, to help them control and manage their stress using techniques that pander to the specifics and particulars of their jobs.

2.10. Summary

This chapter's focus is on the literature that explains the concept of stress. It began by mentioning the first person who discovered the concept of stress, Mr. Hans Seyle. The chapter then goes on to look at how the concept of stress was defined and redefined by other theorists. It looks at the terms "stress" and "stressor" in addition to the terms "eustress", and "distress" which denote positive experiences of stress and negative experiences of stress respectively.

A model of the stress process by Moss (1981) is reflected in this chapter as well. The model shows how a stressor impacts upon or threatens an individual; how this

may be mediated by other factors which influence the way in which the individual perceives stress; how the reaction of the individual depends upon their coping ability, and how they perceive the threat; and finally, how the consequences of the stress process emerge over time.

It has been established in this chapter that stress is a perceived quality and therefore, there is no objective measure of it.

The chapter then goes on to address the different theoretical models of stress such as the psychosomatic model, the protective reaction pattern model, the psychological responses to traumatic experiences model, the responses to extreme stress model, the interactional model, the systems model of the human stress response, and the person-environment fit and job stress model.

The physiology of stress is then briefly covered. Following this, the chapter looks in detail at the different pressures of work that produce negative stress. These are: low pay; incentive payment systems; job design; work organisation; shiftworking; work overload or underload; job insecurity; organisational hierarchies; role conflict and role ambiguity; and lack of control over work.

Further, the way in which stress can be managed in organisations is considered. The chapter looks at how organisations can relieve employee stress by either changing employees to reduce their stress; or changing the organisation itself to reduce stress.

Finally, the literature written on coping and coping techniques is reviewed. The section focuses on the work and literature of Carver, Scheier and Weintraub (1989) and their definitions of problem-focused coping and emotion-focused coping. It also looks at Cooper (2000) and a cybernetic theory of stress and coping.

The concept of control is explored as well. It is considered to be a factor that influences how the work environment is perceived and therefore helps to determine

how an individual will appraise objective work conditions. Negative perceptions result in little control and increased stress, whilst positive ones increase control and reduce stress.

The chapter goes on to look briefly at alternate coping methods such as meditation and breathing exercises. These are individually focussed interventions. The organisational approach to stress management is then analysed, looking at the shift in focus from individually based coping interventions to organisational preventative interventions. Concepts such as stress audits and primary, secondary and tertiary level organisational interventions are covered.

Finally, the content of the Stress Management Programme at Durban Metro Electricity is explored. Since no specific theory was adhered to in constructing the programme, the researcher took the liberty to draw parallels with the content of the SMP and the theory of BASIC ID by Lazarus (in Palmer & Dryden, 1996 and Palmer, 2001). Suggestions for effective SMP's are then covered.

Chapter Three

Methodology and Research Design

3.0. Introduction

The research conducted comprised of two sessions of data collection and analysis. The first session consisted of the pretest, to gauge the levels of stress of employees at Durban Metro Electricity. The State-Trait Anxiety Inventory as well as the General Health Questionnaire were used. In addition to this, a General Information Questionnaire was administered to aid in the identification of what the employees perceived as stressors in the workplace. It also provided biographical details of the group of employees attending the stress management programme.

The posttest was conducted three weeks after completion of the stress management programme. The State - Trait Anxiety Inventory and the General Health Questionnaire were used to measure stress levels of the employees after they were exposed to the stress management programme.

Both the pretest and posttest were coded on statistical graphics from the Statistical Package for the Social Sciences (SPSS) computer programme. This provided the statistics for the results, discussion.

3.1. Research Objectives

Research on stress levels at Durban Metro Electricity has been conducted by Watson (1998). However, such research was based solely on the stress levels of managers. Such research was aimed to identify Type - A behaviour amongst managers as well as to find solutions toward reducing the stress experienced.

The focus of this research will be on all employees, to identify what they perceive as stressors. This will help to compare the differences and similarities in perceptions of stress at Durban Metro Electricity. It will also facilitate suggestions as to how these

employees can try to manage and cope with their stress.

The researcher aims to fulfill the following objectives in the course of the research:
(i) To determine the stress levels of employees prior to a stress management programme using the State - Trait Anxiety Inventory and the General Health Questionnaire. In addition a general information questionnaire will attempt to identify what employees themselves perceive as stressful.
(ii) To determine the coping abilities of employees prior to a stress management programme from the general information questionnaire, using Carver, Scheier and Wientraub's (1989) theoretical framework of coping methods, as well as looking at theoretical suggestions put forth by Wilson (1995), Lazarus (in Stress and Coping, 1977), Maultsby and Hendricks (1974), Spector (in Cooper, 2000) and Fay, Sonnentag & Frese (in Cooper, 2000).
(iii) To determine whether the stress levels are reduced in any way once the employees have undergone a stress management programme.
(iv) To determine whether coping abilities improve once the training programme has been completed by the employees.

3.2. Research Methodology

Two research methods were used for collection of data, namely qualitative and quantitative data.

3.2.1. Quantitative Research
The aim of the research is to access stress levels and coping ability of employees before and after undergoing a stress management program. One of the most appropriate method to obtain such data would be to use the quantitatively scored State-Trait Anxiety Inventory and the General Health Questionnaire in addition to a qualitative general information questionnaire. The data obtained from these are primarily statistical data. For the purpose of this research a quantitative approach would be used to attain the data required. However, the general information

questionnaire requires qualitative information along with quantitative answers, and thus, some qualitative data analysis shall also be done.

Babbie (1990) defines quantitative research as a numerical representation and manipulation of observations for the purpose of describing and explaining the phenomena that the observations reflect.

Bryman and Cramer (1990) assert the importance of quantitative data as its analysis allows for recognition of faulty conclusions or potentially biased manipulation of the information, that can occur with qualitative data analysis. In addition, with the research design being that of surveys, quantitative data analysis does not allow for the researcher to manipulate any of the variables of interest, and data relating to all variables are collected simultaneously. Quantitative data analysis provides for concrete conclusive information through statistics and percentages.

The process of quantitative data analysis requires the researcher to :
Identify a theoretical domain and formulate a theory to be researched.
A hypothesis is formulated (which relates to a limited facet of the theory) and then researched. In addition, the hypothesis allows the researcher to think systematically about what they want to study, and to structure their research plans according to this.

The validity of a hypothesis is assessed. This is necessary to develop measures of the constituent concepts. This is called 'operationalisation'. It involves translation of concepts into variables that can be studied and measured more easily.
Identify the population and select a sample appropriately.
Set up a research design. There are two basic types : experimental design - where the researcher actively manipulates aspects of a setting, (laboratory or field setting) and observes the effects of that manipulation on the experimental subjects. The survey or correlational design comprises of a technique for analysing relationships between variables. Both types of research designs however, do have implications

for the kinds of statistical manipulation that can be performed on the resulting data. Data collection is the next step in the process, and this occurs through interviews, questionnaires, observation, or any other method.

The analysis of data is important to explore the possibilities of causal or other relationships between variables.

If the analysis of the data suggests that a hypothesis is confirmed, this result can be fed back into the theory. However, the refutation of a hypothesis can be just as important as it may suggest that the theory is faulty, or in need, at least, of revision (Bryman and Cramer, 1990).

The process suggested by Bryman & Cramer (1990) may not always be followed in reality. However, it does help to show the importance of developing measures of concepts and the thorough analysis of resulting data in quantitative research. This is associated to the fact that one of the main aims in quantitative research is the demonstration of causality (ie: that one variable has an impact upon the other).

The purpose of this research is to research the possibility of causal relationships existing between stress levels and a stress management programme, as well as those existing between coping strategies and the programme. Research will also look at whether these stress levels decrease once the stress management programme has been completed, as well as whether the coping abilities increase after the completion of the programme.

3.2.2. Qualitative Research

Qualitative data is usually data in the form of words, rather than numbers, and is based on interviews, documents or observation. It has always been used in some social scientific fields such as anthropology, history, and political science. However, in the last decade, more researchers in basic disciplines and applied fields such as psychology, organisational studies, health care, educational research and family

studies have shifted to a more qualitative paradigm (Miles & Huberman, 1994).

Qualitative data analysis entails analysing detailed descriptions of situations, events, people, interactions, observed behaviours, direct quotations from people about their experiences, attitudes, beliefs and thoughts, and excerpts or entire passages from documents, records and case histories, which comprise the raw data (Patton, 1980). The qualitative approach would also be used to collect and analyse data that would provide insight into the thoughts, opinions, experiences and attitudes of the employees with regard to their workplace and its link to stress.

The qualitative data analysis process comprises of three concurrent flows of activity:
■ data reduction or coding
■ data display
■ conclusion drawing and verification

[i] Data reduction is the process of selecting, focusing, abstracting and transforming the data that appear in written-up field notes or transcriptions. Even before the data are actually collected, the researcher decides which conceptual framework, which cases, which research questions and which data collection approaches to use. As data analysis proceeds, episodes of data reduction occur eg: writing summaries, coding, categorising themes. These are all analytic choices which sharpen, sort, focus, discard and organise data in a way that final conclusions can be drawn and verified. It helps to keep numbers and words together in the analysis as it is important not to strip data from its context (Miles & Huberman, 1994).
Coding is also part of the analytic process, as it helps a researcher to code, organise, tag, and label units of meaning to the descriptive or inferential information compiled during a study. A researcher should code data continuously as they go along collecting it.

First level coding is a device for summarising segments of data.
Pattern coding entails grouping the summaries into smaller numbers of sets, themes

or constructs (Miles & Huberman, 1994).

Both levels of coding would be useful in categorising data of a qualitative nature and making it more comprehensible and easy to display in graphs. Correlations between variables could also be established once coding has been done. This shows that coding of qualitative data into quantitative display methods is also possible and desirable.

The above supports the view that there is a growing recognition that qualitative research should be used in relationship with other methods. There is more to gain from a collaboration of quantitative and qualitative analysis, rather than competition between the two. The methods complement each other (Dey, 1993).

[ii] Data display is an organised, compressed assembly of information that allows conclusion drawing and action. It facilitates better displays of types of matrices, graphs, charts and networks which assemble organised information into an immediately accessible and compact form.

[iii] Conclusion drawing or verification occurs from the start of data collection when the analyst begins to decide what things mean, noting regularities, patterns, explanations, possible configurations, causal flows and propositions. However, competent researchers will hold their conclusions lightly, maintaining openness and scepticism. The meanings emerging from the data have to be tested for their validity.

Since these above three processes occur concurrently, we can observe that qualitative data analysis is an iterative, continuous process as coding (data reduction) leads to new ideas on what should go into the matrix (data display). Entering such data requires further data reduction, and as the matrix fills up, preliminary conclusions are drawn (Miles & Huberman, 1994).

It must be kept in mind however, that qualitative data is extremely subjective. It is the views or experiences of people and their perceptual realities. Therefore, the researcher needs to remember that a number of factors influence the data they obtain. People could be biased in their accounts of certain situations, or could be selectively remembering certain incidents and not others. The presence of the researcher will affect the data as people providing it may want to tell the researcher what they think he / she wants to know. They may also be influenced and affected by the researcher's style, approach, and conduct, as well as vice versa. This needs to be accounted for in the analysis of qualitative data.

Therefore, the qualitative data analysis approach that the researcher aims to take is that of Inductive data analysis:

3.2.3. Inductive analysis

This entails deriving patterns, themes and categories in the data from the data itself. Therefore, the natural variations and patterns that emerge from the data are noted, instead of being imposed on it prior to data collection and analysis. Thus, researchers of quantitative data looking to analyse it need to ascertain how participants or contributors of qualitative data respond to and are affected by the situations they are in (Patton, 1980).

3.2.4. Conclusion

Qualitative data analysis is extremely useful for analysing the research of qualitative information such as interview responses and narratives. The advantages and disadvantages have been discussed, as well as possible solutions to the disadvantages.

However, the most important aspect to keep in mind when doing qualitative data analysis, is that of its usefulness in combination with quantitative methods, and with computer programs which facilitate easy coding and categorising of qualitative data. This shall be the approach in the research interviews for this research study.

3.2.5. The Advantages of Qualitative Data

Qualitative data is a source of well-grounded, rich descriptions and explanations of processes in identifiable local contexts. This allows a researcher to see which events could possibly have led to consequences of stress, preserving a chronological flow, and helping to derive useful explanations. Qualitative data analysis is also more likely to lead to new discoveries and integrations of data. It also helps researchers get beyond initial conceptions and to generate and revise conceptual frameworks (Miles & Huberman, 1994).

It is widely held by qualitative theorists that the findings from qualitative data analysis have a quality of validity. This is because words that are organised into incidents or stories have a concrete, vivid and meaningful essence that is more convincing to the reader than pages of numbers. Qualitative research requires an intense contact with a 'field' situation. These are reflective of the everyday life of individuals, groups, societies and organisations. We therefore find that there is a focus on ordinary events in natural settings so that we have a strong handle on what 'real life' is really like for the subjects. The data is collected in close proximity to a specific situation rather than through the mail or the phone. With such an emphasis on a specific case and context taken into account, the understanding of underlying issues should be much deeper (Miles & Huberman, 1994). It is therefore hoped that themes and ideas will emerge from the qualitative data obtained from the 'General Information Questionnaire' with regard to the perceived causes of stress of employees. Such themes and ideas will then be categorised and coded and will show the main sources of stress perceived by employees at Durban Metro Electricity.

As mentioned above, such richness of data and holism of analysis provides a strong potential for revealing complexity and vivid descriptions. Furthermore, with the inherent flexibility of data collection times and methods that can be varied in qualitative data collection and analysis, a researcher can understand a situation from all its different angles (Miles & Huberman, 1994, & Patton, 1980).

85

The role of the researcher is, then, to gain a holistic and integrated view of the context under study ie: its logic, arrangements, explicit and implicit rules. The researcher must then try to capture data on the perceptions of the subjects through a process of deep attentiveness, empathetic understanding and suspending of preconceptions about the topic under discussion. When going through the material, the researcher may isolate certain themes and expressions that can be reviewed with the subjects, but should also be maintained in their original forms throughout the study. This can help explain the ways in which people in different settings come to understand, account for, take action and manage their everyday situations. With such an emphasis on peoples' 'lived experience', qualitative data is well - suited for finding the meanings people place on events, processes and structures of their lives (perceptions, assumptions) and for connecting these meanings to the social world around them (Miles & Huberman, 1994).

3.3. Population

A population, according to Bailey (1982) and Babbie (1990), is the sum total of all the units of analysis, about whom we wish to draw a number of conclusions.

The population to be researched will be those employees that are currently undergoing a stress management program at Durban Metro Electricity, to assist in providing them with skills to cope with stress, or relieve it somewhat, and to manage better in the working world.

3.4. Sample

A sample is a set of respondents selected for study in a way that ensures that they are representative of their population (Babbie, 1990).A purposive sample is one in which each sample element is selected for a purpose, especially if it is in a unique position that is required for the sample. It involves studying the entire population of some limited group or a clearly defined subset of a population (Bailey, 1978).

Qualitative samples are also usually purposive, not random, as the researcher is usually looking for specific issues (Miles & Huberman, 1994). Thus, only those candidates who are undergoing a stress management program shall be chosen for the sample.

A bare minimum of thirty cases is considered by research theorists as the bare minimum number for the obtaining of valid results (Bailey, 1982). However, the stress management programme comprised of forty people, thus being larger than the minimum number, and hence, having the potential to produce more valid and reliable results and conclusions.

3.5. Data Collection Instruments

A number of data collection instruments shall be used for obtaining the required data. The types of instruments shall be the 'General Information Questionnaire' (see Appendix B-1); the 'State-Trait Anxiety Inventory' (see Appendix C-1) and the 'General Health Questionnaire (see Appendix D-1).

[i] The General Information Questionnaire was constructed by the researcher. According to Bailey (1982) questionnaire construction requires some caution. The following criteria have to be adhered to:
- The questions have to be relevant to the goals of the research;
- The questions have to be relevant to the respondents themselves;
- The questions have to be simply worded so as to be easy to read and understand. In addition, the level of the wording must be congruent with the educational level of the respondents;
- There should be no double-barreled questions, leading questions or ambiguous questions;
- The questions should refer to concrete and specific matters such as age/ sex.
- When it comes to asking for abstract or opinionated information the questions should be open - ended, as the researcher cannot possibly provide for all

categories of answers; and

- Closed - ended questions are also useful as the answers are standard, easy to code and analyse, and provide complete and clear meaning on the topic.

The General Information Questionnaire consists of two sections: a Biographical Details section, and a General Information section. In the Biographical Details section, the subjects were asked to place an 'X' in the category that is most applicable to them with regards to occupation, race, gender, age, marital status, and number of dependants. Hence, close-ended questions were used.

The General Information section asked what the employees / subjects felt was most stressful for them. It also asked why the situation was stressful, how the stress affected them, and asked for the subjects to suggest ways in which the stress could be managed. Hence, open-ended questions were used (See Appendix B-1 for General Information Questionnaire).

[ii] The ' State-Trait Anxiety Inventory' (STAI) is a unique inventory of stress in that it contains two scales in one. It consists of forty statements which people can use to describe themselves by placing an 'X' next to the specific columns. The first twenty items measure state anxiety (a psychological state), and the second scale measures trait anxiety, that is, a measure of the relatively stable anxiety vulnerability of the subject . The inventory was developed by Spielburger in 1970 (Goldberg, 1972).

[iii] The 'General Health Questionnaire' consists of twenty items, that aim to provide information about the current or present mental state of the individual. It cannot be a measurement of permanent attributes of personality. The twenty item version used in the research is the abbreviated version of the sixty - item version, but its advantage is that the specific twenty items have been shown to differentiate between groups of respondents with different degrees of stress. The items have a four point answer scale which can be likened to the "Lickert Scale" and coded as such (Goldberg, 1972) (see Appendix D-1 for General Health Questionnaire).

3.6. Data Collection

The questionnaires will be administered to the sample before they embark on a stress management programme, as well as three weeks after they have completed it. They shall be allowed an approximate period of one hour in which to complete them. The questionnaires shall be handed personally to the employees .

3.7. Data Analysis

According to Bailey (1982), a pretest is administered prior to the test stimulus. In the case of this research, the test stimulus is the Stress Management Programme, and the pretest consists of three questionnaires (discussed under data collection instruments). Once this has been completed, the posttest is administered. The same questionnaires as the pretest will be used for the posttest. However, the causal effects of the test stimulus (Stress Management Programme) ensure that the results of the posttest are different from the pretest. Hence, it is not possible to show the reliability of the measure. Nevertheless, the posttest, being a repetition of the pretest, could constitute a test-retest measure of reliability.

The pretest and post-test raw scores shall be entered, coded and analysed on the Statistical Package for the Social Sciences (SPSS) computer programme.

The advantage of using this package is that it enables the researcher to analyse quantitative data very quickly and in many different ways. It eliminates long hours of working out scores and carrying out involved calculations, as well as making calculation mistakes. In addition, the programme allows for bivariate analysis (exploring relationships between two variables) as well as multivariate analysis (exploring differences among three or more variables) (Bryman & Cramer, 1990).

This research, will analyse data and find relationships or correlations between stress levels and the stress management programme. It will also try to determine if

the programme has any effect on reducing stress levels and increasing coping abilities.

3.8. A Critique of the Methodology

There are three main issues that need to be covered in the critique:

(i)The sample of the research done is specific to Durban Metro Electricity and therefore, any generalizations or conclusions that are made from the results can only be done with regard to Durban Metro Electricity itself.

Since the study is based on a purposive sample within the company, the information gathered shall only be applied to this specific company and no other.

(ii) When the posttest had been administered, there was an incidence of subject mortality. One subject decided to withdraw from the sample, and chose not to answer the questionnaire. This may influence the posttest scores.

(iii) The workshop was run over three days. Two days were run on a Thursday and Friday in one week. The third day was run the following Friday. The aim of this was to allow employees to become familiar with the stress reduction techniques taught at the course in the space of one week. Part of the third day served as a feedback session. The pre-test was administered on the morning of the first day of the course. The posttest was administered three weeks after the last day of the course. The limitation here may be that three weeks is too short a time to evaluate the impact of the stress management course on the employees of DME. However, due to time limits placed on the research study, three weeks is the maximum amount of time that could be taken.

Chapter Four
Presentation of Results

4.0. Introduction

In this chapter, the statistical results from the pretest and posttest of the State Trait Anxiety Inventory and the General Health Questionnaire will be presented through the use of the SPSS computer package, along with the qualitative information obtained from the General Information Questionnaire.

The presentation of the tables and bar graphs will be used to show certain statistics and percentage counts of stress levels from the State Trait Anxiety Inventory, the General Health Questionnaire and the biographical details section of the General Information Questionnaire. The qualitative answers from the second section of the General Information Questionnaire will be categorised and stated as they were by the subjects.

4.1. Biographical Information

First, it is important to provide some biographical details of the subjects such as age, race, gender, job titles, marital status and their number of dependants, as such information may be implicated in the effects of work stress. The following tables provide the above-mentioned information.

Table 1: Distribution of Race by Gender

RACE	MALE	FEMALE	TOTAL
Asian	10	0	10
Black	7	3	10
Coloured	1	0	1
White	14	5	19
TOTAL	32	8	40

Table 2: Distribution of Age Category by Job Title

Job Title	AGE				
	20 – 25	25 – 30	30 - 40	40 - 50	50 - 60
Clerk		1	4	2	2
Control Officer			2	3	1
Electrician	1	2	4		
Engineer		1			
General Assistant			1		
Handyman		1			
Intern Psychologist		1			
Manager		1	1		
Project Controller				1	
Supervisor			2	3	2
Switching Officer			1		
Test Officer	1				
Trainee	2				

Table 3. Distribution of Employees According to Job Title and Gender

JOB TITLE	MALES	FEMALES	TOTAL
Clerk	5	4	9
Control Officer	6	0	6
Electrician	7	0	7
Engineer	1	0	1
General Assistant	1	0	1
Handyman	1	0	1
Intern Psychologist	0	1	1
Manager	1	1	2
Project Controller	1	0	1
Supervisor	6	1	7
Switching Officer	1	0	1
Test Officer	1	0	1
Trainee	1	1	2

Table 4 : Distribution of Race by Job Title

JOB TITLE	ASIAN	BLACK	COLOURED	WHITE	TOTAL
Clerk	2	5	0	2	9
Control Officer	1	2	0	3	6
Electrician	3	0	0	4	7
Engineer	1	0	0	0	1
General Assistant	0	1	0	0	1
Handyman	1	0	0	0	1
Intern Psychologist	0	0	0	1	1
Manager	1	0	0	1	2
Project Controller	0	0	0	1	1
Supervisor	0	0	1	6	7
Switching Officer	1	0	0	0	1
Test Officer	0	0	0	1	1
Trainee	0	2	0	0	2

Now that these results have been presented, it is possible to continue with the results of the pretest obtained from the State Trait Anxiety Inventory and the General Health Questionnaire. The results will be presented in the form of bar graphs and tables for easy interpretation and understanding.

4.2. Qualitative Data Results

The qualitative data was collected from the General Health Questionnaire. Once this questionnaire was categorised and coded, it yielded information on what the employees themselves perceived as stressful in the workplace, as well as how the stress affects them, and how they think it can be managed.

. 4.2.1. Five different categories were identified with regard to the common themes of stressors:

       i. Management problems,

      ii. Safety at work,

     iii. Staff and attitudes of staff,

iv. Stressful work tasks, and

v. General job / career stress.

4.2.1.1. Management Problems

10 employees mentioned problems with management. The primary complaint the employees have is that management "cannot control the job environment, which in turn causes anger and resentment". This is further explained by others as: "Management cannot solve work-related problems in the office, and therefore take the authority of the staff away. This results in the staff not being responsible for very much, and they do as they please which results in poor service".

Another employee reiterates this by saying: "There is inadequate management as management do not accept responsibility for problems and refuse to take corrective action to solve problems as they only are monitored, not the other staff. The staff problems are irrelevant".

Other complaints include:

- Management giving no guidance regarding the usage of new equipment.
- Autocratic managers affect positivity and planning in the work environment.
- Managers' expectations are too high – there is an overload of tasks from them.
- Promises are not kept by manager when it comes to career pathing.
- Management decisions are problematic.
- Inability of management to control staff.

4.2.1.2. Problems with Safety at Work

Safety at work can be divided into two further categories, namely safety when dealing with electrical problems and safety when going into dangerous / violence infested areas when dealing with electrical problems.

(i) Safety with Electrical Problems

8 employees cited work-stress associated with dealing with electrical problems. These include:

- Switching officers having to work with switching electricity;
- Engaging in high voltage switching with semi–skilled workers;
- Supervisors being responsible for the safety of themselves and others when doing switching work;
- Having to make decisions which affect the safety of others when dealing with electrical problems;
- Experiencing sudden electrical tripouts when daily work is in progress;
- Weather conditions being bad when working with electricity (eg: rain, lightning).
- Switching officers having to patrol overhead lines; and
- Noise at work.

(ii) Safety in Dangerous Areas

4 employees mentioned dangerous areas, so this seems to be a significant stress factor as well. Employees say that it is stressful because:

- Working in problem areas, one can be murdered for one's cellphone;
- Township work may result in danger due to hijacking, robbery or death;
- Staff working in unsafe areas have to report to a manager, and he finds it stressful to send them out to such places; and
- Township work is generally unsafe.

4.2.1.3. Problems with attitudes of staff and staff in general

12 employees cited the attitudes and behaviour of colleagues, staff and managers to be problematic. Several variations of this factor are mentioned:

- Authority of staff has been taken away. With no responsibility upon them, the staff tend to do as they please;

- Negative attitudes of staff;
- Staff having difficulties with superiors;
- Colleagues spend too much time doing one task, leaving more work for those who work faster;
- Undisciplined staff;
- Dealing with staff is problematic (for supervisors);
- Dealing with too many staff at one time is stressful;
- Incompetent staff;
- Too many demands or unreasonable demands by boss;
- Shortage of staff results in having to do other people's work, which is time-consuming, and
- Insensitivity of other staff.

4.2.1.4. Work tasks that are perceived as stressful

Due to the variety of job titles evident amongst the employees at the stress management programme, it is difficult to categorise specific types of work tasks that are perceived as stressful. However, it was found that a significant total of 14 employees cited different work tasks as stressful for them. These include:

Table 5: Stressful Work Tasks Perceived by Clerks

Description	Number
Dealing with customers on short notice;	1
Sitting for long periods of time;	1
Routine clerical work;	1
Filing;	1
Sorting out others' errors;	2
Binding of time sheets;	1
Paper work;	1
Answering telephones; and	2
Dealing with the public and large numbers of queries	3

Table 6: Stressful Work Tasks Perceived by Trainees

Description	Number
Not being given enough work (not challenged)	1

Table 7: Stressful Work Tasks Perceived by Supervisors

Description	Number
Supervision in general is seen as stressful; and	4
Being given extra work when daily work is not complete.	4

Table 8: Stressful Work Tasks Perceived by Shift Workers

Description	Number
Shift work results in lack of sleep, and is physically and mentally stressful.	1

4.2.1.5. General job stress

4 employees mentioned aspects of job stress that relate to the lack of work reward / satisfaction. These are:

Table 9: Aspects of General Job Stress

Description	Number
The lack of a career path;	1
Not having a permanent job, thus living in a feast or famine situation;	1
Being on standby two weeks per month; and	1
Incentive schemes are perceived as stressful.	1

4.3. Employees' Perceived Effects of Stress

The perceived effects of stress have been divided into three categories:

(i)   Physical effects;

(ii)   Emotional effects; and

(iii)   Cognitive effects

Table 10: Physical Effects of Stress Perceived by Employees

Description	Number
Feel drained and exhausted due to work load. Experience physical discomfort due to work pressure ie: stiff muscles, tired body, headaches and inability to relax.	7
Shift work is stressful due to lack of sleep, exhaustion, bad temper, disorientation and irritability.	2
Sleep is affected due to work load, work accumulation and tiredness.	9
Experience nausea.	1
Experience high blood pressure.	2
Weight gain results due to sitting for long periods of time (which is perceived as stressful).	2

Table 11: Emotional Effects of Stress Perceived by Employees

Description	Number
Emotionally affected when consumers 'fight' with or insult them when there is a power failure.	2
Getting no support from management, and having supervisors that are inconsiderate and place great pressure upon them with large workloads.	3
Feel that people do not understand them, and they feel alone and 'inadequate'.	2
Feel emotionally angry, fearful, frustrated, resentful, despondent, moody, upset, unhappy and irritable	11
Vent negative emotions on family.	4

Table 12: Cognitive Effects of Stress Perceived by Employees

Description	Number
Mental tiredness and exhaustion	11
Midnight shifts affect electricians who have to do emergency work late at night when they are tired – this implies that safety of employees is compromised	2
Lack of "mental stimulation, brainstorming and mind exercises" results in demotivation in finding no career progress.	2

4.4. The Perception of Employees Regarding Managing and Reducing Stress.

When it comes to managing and reducing stress, the responses of the employees can be divided into categories of physical or environmental changes and emotional changes as well as a change in mental or cognitive activity and thought.

Table 13: Physical or Environmental Changes Suggested to Reduce Stress

Description	Number
Recruiting more staff to reduce workload.	3
Better management is needed. Managers need to be sent on courses to identify their approach towards, and appreciation of, their staff.	4
More tea and smoke breaks should be allowed	3
More time for relaxation, sleep should be taken by employees themselves. In addition, attending stress management programmes will help.	7
Work should be more evenly distributed over the shift work sessions.	1
A reinvestigation of the effects of affirmative action should be done to find the drop in positivity in the company.	1
More time should be given to allow employees to finish work. The present time constraints are stressful.	1
New and quality work materials would help to reduce stress.	2
Slowing down, planning work properly, and doing one task at a time will reduce stress caused by trying to complete various tasks simultaneously.	3
Working as a team would help to reduce work stress.	3
Some employees do not know how to deal with physical stress.	3

Table 14: Emotional Changes Suggested by Employees to Reduce Stress

Description	Number
Supervisors and managers should be more aware and more considerate in their attitude, and be willing to resolve conflicts.	6
Employees should ignore what stresses them out.	3
Speaking to people, asking for advice and communicating to make others understand your point of view.	3
Facing issues head-on will help reduce stress.	1
Instilling a sense of pride in oneself and in colleagues to make them feel better and more confident about themselves.	3
Some employees do not know how to deal with emotional stress.	3

Table 15: Cognitive Changes Perceived to Reduce Stress

Description	Number
Having the correct tools and information will allow for accurate and efficient work as well as less mistakes to correct.	2
Organising time and planning for the day helps to reduce stress.	3
Weighing the pro's and cons before making a decision, and thinking twice before reacting to work problems helps in managing stress.	3
It is important to educate staff about implementing safety awareness measures in dangerous areas.	2
Making cognitive and physical changes to the everyday work routine will aid in stress reduction.	2
Setting fun goals as well as career goals will help reduce the overwhelming feelings of work stress.	1

Next, it is possible to look at bar graphs and tables showing statistics and percentage counts of stress levels from the State Trait Anxiety Inventory and The General Health Questionnaire.

Graph 1 : Pretest: Number of Employees According to Job Title Who Feel Nervous

Graph 1 : Pretest: Number of Employees According to Job Title Who Feel Nervous
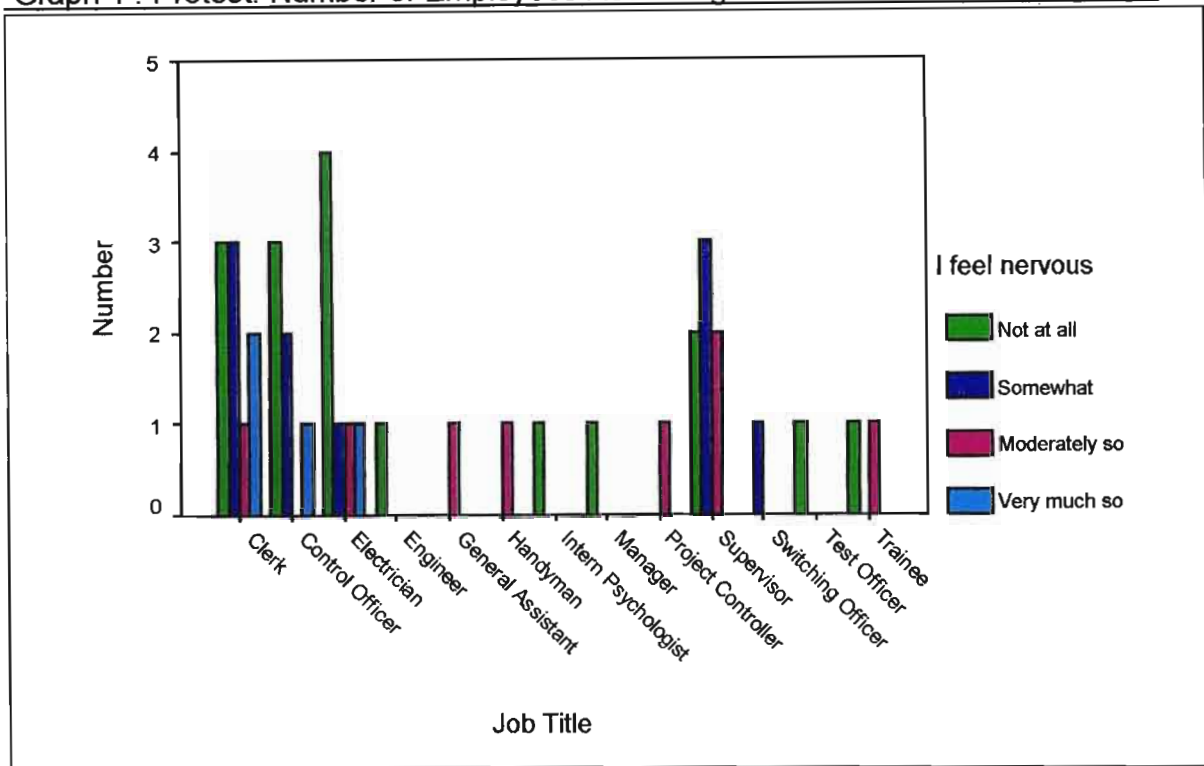
From the above graph, it can be seen that a significant two clerks and an additional one control officer and one electrician all feel very nervous.

One each of clerks, electricians, general assistants, handymen, project controllers and trainees all feel moderately nervous. In addition, two supervisors fall into the same category.

Those who feel somewhat nervous comprise three clerks and three supervisors, two control officers, one switching officer and one electrician.

Three each of clerks and control officers say that they do not feel nervous at all. Four electricians, two supervisors, and one each of engineers, intern psychologists, managers, test officers and trainees all feel no nervousness at all.

Table 4.16: Pretest: Count, Column Percentage and Total Percentage of Employees Who Feel Nervous

Count Column % Total %	I Feel Nervous				
	Missing Observation	Very much so	Moderately so	Somewhat	Not at all
Clerk		3	3	1	2
		18	30	13	50
		8	8	3	5
Control Officer		3	2		1
		18	20		25
		8	5		3
Electrician		4	1	1	1
		24	10	13	25
		10	3	3	3
Engineer		1			
		6			
		3			
General Assistant				1	
				13	
				3	
Handyman				1	
				13	
				3	
Intern Psychologist		1			
		6			
		3			
Manager	1	1			
	100	6			
	3	3			
Project Controller				1	
				13	
				3	
Supervisor		2	3	2	
		12	30	25	
		5	8	5	
Switching Officer			1		
			10		
			3		
Test Officer		1			
		6			
		3			
Trainee		1		1	
		6		13	
		3		3	

Graph 2: Pretest: Number of Employees According to Job Title Who Feel Blue
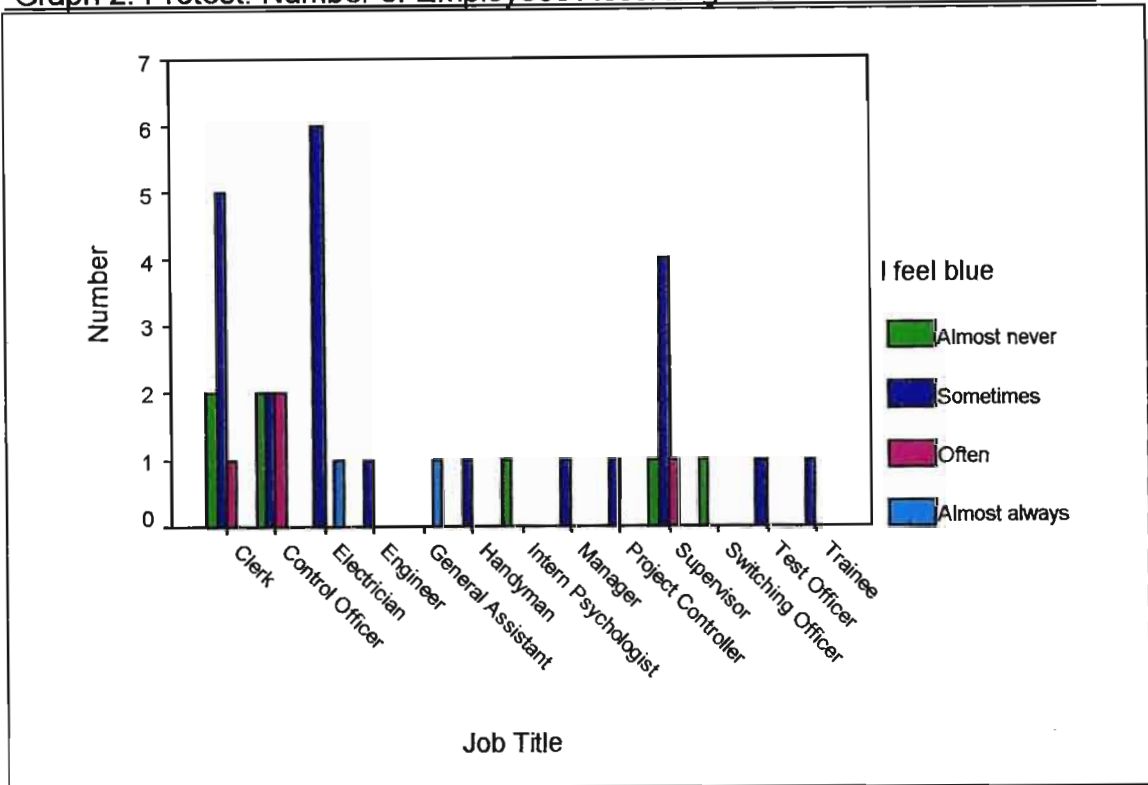
In the graph above two clerks and two control officers say they almost never feel blue. One each of intern psychologists, supervisors and switching officers also claim almost never to feel blue.

Five clerks, two control officers, four supervisors and six electricians state that they sometimes feel blue. One each of engineers, handymen, managers, project controllers, test officers and trainees also state that they sometimes feel blue. One clerk, one supervisor, and two control officers claim to often feel blue.

However, one electrician and one general assistant claim to almost always feel blue.

Table 4.17: Pretest: Count, Row Percentage, Column Percentage and Total Percentage of Employees who Feel Blue

Count Column % Total %	I Feel Blue				
	Missing Observation	Almost Never	Sometimes	Often	Almost Always
Clerk	1	2	5	1	
	50	29	22	25	
	3	5	13	3	
Control Officer		2	2	2	
		29	9	50	
		5	5	5	
Electrician			6		1
			26		50
			15		3
Engineer			1		
			4		
			3		
General Assistant					1
					50
					3
Handyman			1		
			4		
			3		
Intern Psychologist		1			
		14			
		3			
Manager	1		1		
	25		4		
	3		3		
Project Controller			1		
			4		
			3		
Supervisor	1	1	4	1	
	25	14	17	25	
	3	3	10	3	
Switching Officer		1			
		14			
		3			
Test Officer			1		
			4		
			3		
Trainee	1		1		
	25		4		
	3		3		

Graph 3: Pretest: Number of Employees According to Job Title Who Feel like Crying
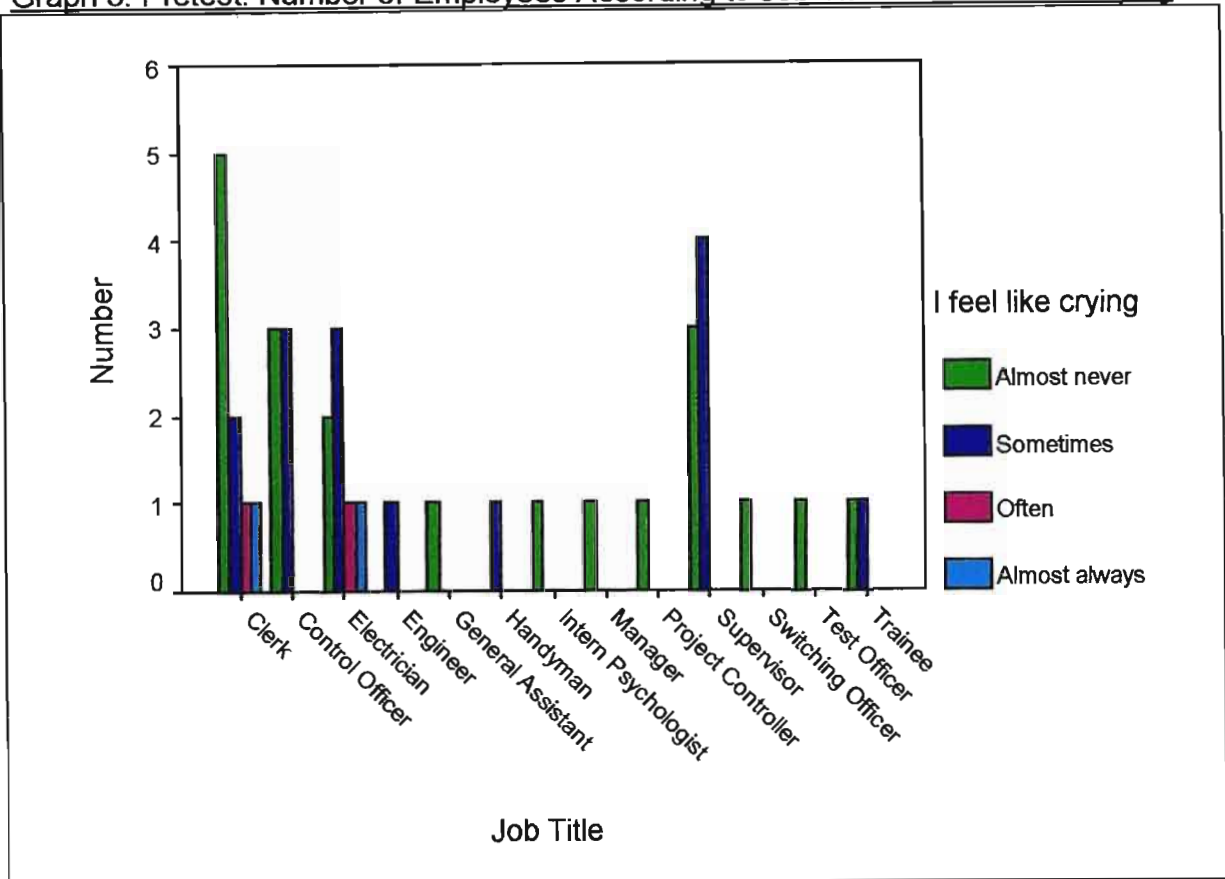
From the above graph, it can be observed that five clerks almost never feel like crying, whereas a lesser three each of control officers and supervisors almost never feel like crying.

Two electricians almost never feel like crying. In addition, one each of general assistants, intem psychologists, managers, project controllers, switching officers, test officers and trainees almost never feel like crying.

Two clerks sometimes feel like crying, whereas a greater three each of control officers and electricians sometimes feel like crying. In addition, four supervisors sometimes feel like crying, and one each of engineers, handymen and trainees also feel like crying sometimes. One each of clerks and electricians often feel like crying, and one each of clerks and electricians almost always feel like crying.

Count Column % Total %	I Feel Like Crying				
	Missing Observation	Almost Never	Sometimes	Often	Almost Always
Clerk		5	2	1	1
		25	13	50	50
		13	5	3	3
Control Officer		3	3		
		15	20		
		8	8		
Electrician		2	3	1	1
		10	20	50	50
		5	8	3	3
Engineer			1		
			7		
			3		
General Assistant		1			
		5			
		3			
Handyman			1		
			47		
			3		
Intern Psychologist		1			
		5			
		3			
Manager	1	1			
	100	5			
	3	3			
Project Controller		1			
		5			
		3			
Supervisor		3	4		
		15	27		
		8	10		
Switching Officer		1			
		5			
		3			
Test Officer		1			
		5			
		3			
Trainee		1	1		
		5	7		
		3	3		

The above graph reflects two electricians who are almost always overcome by difficulties. Included in this category are one clerk, one project controller and one supervisor.

Those who often feel overcome by difficulties comprise three clerks, two supervisors and one each of control officers, electricians, general assistants and handymen.

Employees who sometimes feel overcome by difficulties comprise three each of clerks, supervisors and control officers, four electricians, two of trainees, and one each of engineers and test officers.

Two control officers claimed to almost never feel overcome by difficulties, whilst one each of clerks, intern psychologists, managers, supervisors and switching officers feel the same.

Count Column % Total %	I Am Overcome By Difficulties				
	Missing Observation	Very much so	Moderately so	Somewhat	Not at all
Clerk	1	1	3	3	1
	50	14	18	33	20
	3	3	8	8	3
Control Officer		2	3	1	
		29	18	11	
		5	8	3	
Electrician			4	1	2
			24	11	40
			10	3	5
Engineer			1		
			6		
			3		
General Assistant				1	
				11	
				3	
Handyman				1	
				11	
				3	
Intern Psychologist		1			
		14			
		3			
Manager	1	1			
	50	14			
	3	3			
Project Controller					1
					20
					3
Supervisor		1	3	2	1
		14	18	22	20
		3	8	5	3
Switching Officer		1			
		14			
		3			
Test Officer			1		
			6		
			3		
Trainee			2		
			12		
			5		

Graph 5: Pretest : Number of Employees According to Job Title, Who Feel Happy
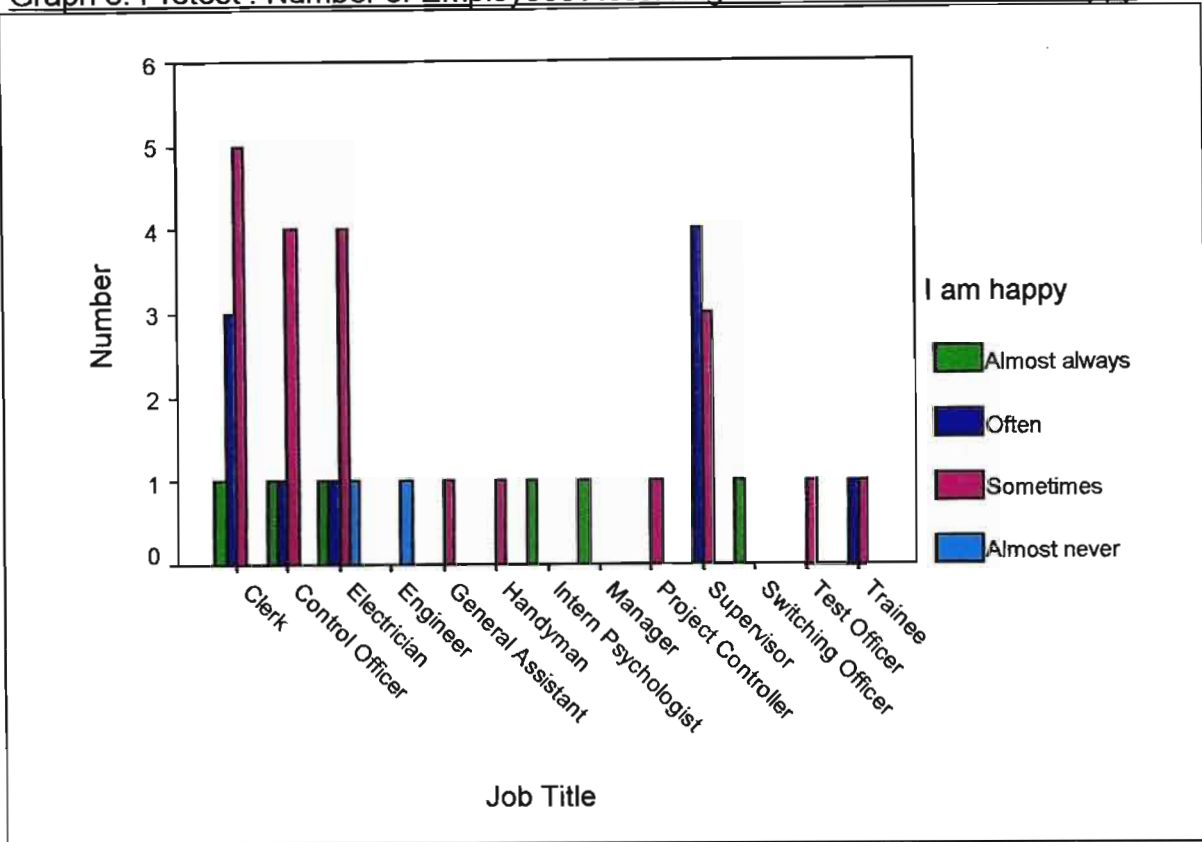
From the above graph, it can be observed that one electrician and one engineer almost never feel happy.

Five clerks, four control officers and four electricians sometimes feel happy, whilst three of supervisors feel the same. In addition, one each of general assistants, handymen, project controllers, test officers and trainees also sometimes feel happy.

Those who often feel happy comprise of four supervisors, three clerks, and one each of control officers, trainees and electricians.

One clerk, one control officer, one electrician, one intern psychologist, one manager and one switching officer all feel that they are almost always happy.

Table 4.20: Pretest: Count, Row Percentage, Column Percentage and Total Percentage of Employees who Feel Happy

Count Column % Total %	I Feel Happy				
	Missing Observation	Almost Always	Often	Sometimes	Almost Never
Clerk		1	3	5	
		17	30	24	
		3	8	13	
Control Officer		1	1	4	
		17	10	19	
		3	3	10	
Electrician		1	1	4	1
		17	10	19	50
		3	3	10	3
Engineer					1
					50
					3
General Assistant				1	
				5	
				3	
Handyman				1	
				5	
				3	
Intern Psychologist		1			
		17			
		3			
Manager	1	1			
	100	17			
	3	3			
Project Controller				1	
				55	
				3	
Supervisor			4	3	
			40	14	
			10	8	
Switching Officer		1			
		17			
		3			
Test Officer				1	
				5	
				3	
Trainee			1	1	
			5	10	
			3	3	

From the above graph, it can be seen that five clerks do not feel that they are
losing confidence in themselves at all. In the same category lies four control
officers, three electricians and two supervisors. One each of intern
psychologists, managers and switching officers also feel that they are not losing
confidence in themselves at all.

Two clerks feel that they are not losing confidence in themselves any more
than usual. The same applies for three each of control officers, engineers, project
controllers, test officers and trainees. In addition, four electricians and three
supervisors also feel that they are not losing confidence in themselves any more
than usual.

One each of clerks, control officers, general assistants and trainees all feel that they are losing confidence in themselves rather more than usual. In addition, two supervisors feel the same way.

One each of clerks and handymen are feeling that they are losing confidence in themselves much more than usual.

Count Column % Total %	I Am Losing Confidence in Myself				
	Missing Observation	Not at all	No more than usual	Rather more than usual	Much more than usual
Clerk		5	2	1	1
		29	14	17	50
		13	5	3	3
Control Officer		4	1	1	
		24	7	17	
		10	3	3	
Electrician		3	4		
		18	29		
		8	10		
Engineer			1		
			7		
			3		
General Assistant				1	
				17	
				3	
Handyman					1
					50
					3
Intern Psychologist		1			
		6			
		3			
Manager	1	1			
	100	16			
	3	3			
Project Controller			1		
			7		
			3		
Supervisor		2	3	2	
		12	21	33	
		5	8	5	
Switching Officer		1			
		6			
		3			
Test Officer			1		
			7		
			3		
Trainee			1	1	
			7	17	
			3	3	

The above graph shows that a significant seven clerks feel moderately pleasant, whilst three supervisors, and two each of control officers and electricians also feel moderately pleasant. In addition, one each of managers and test officers feel the same way.

Two clerks and two control officers feel very pleasant, along with one each of intern psychologists, supervisors and switching officers.

Those who feel somewhat pleasant include two each of control officers and trainees, four electricians, three supervisors, and one each of general assistants, handymen and project controllers. One electrician and one engineer do not feel pleasant at all.

Count Column % Total %	I Feel Pleasant				
	Missing Observation	Very much so	Moderately so	Somewhat	Not at all
Clerk		2	7		
		29	44		
		5	18		
Control Officer		2	2	2	
		29	13	14	
		5.0	5.0	5.0	
Electrician			2	4	1
			13	29	50
			5	10	3
Engineer					1
					50
					3
General Assistant			1		
			7		
			3		
Handyman			1		
			7		
			3		
Intern Psychologist		1			
		14			
		3			
Manager	1		1		
	100		6		
	3		3		
Project Controller				1	
				7	
				3	
Supervisor		1	3	3	
		14	19	21	
		3	8	8	
Switching Officer		1			
		14			
		3			
Test Officer			1		
			6		
			3		
Trainee				2	
				14	
				5	

Graph 8: Pretest: Number of Employees According to Job Title Who Feel
Under Strain
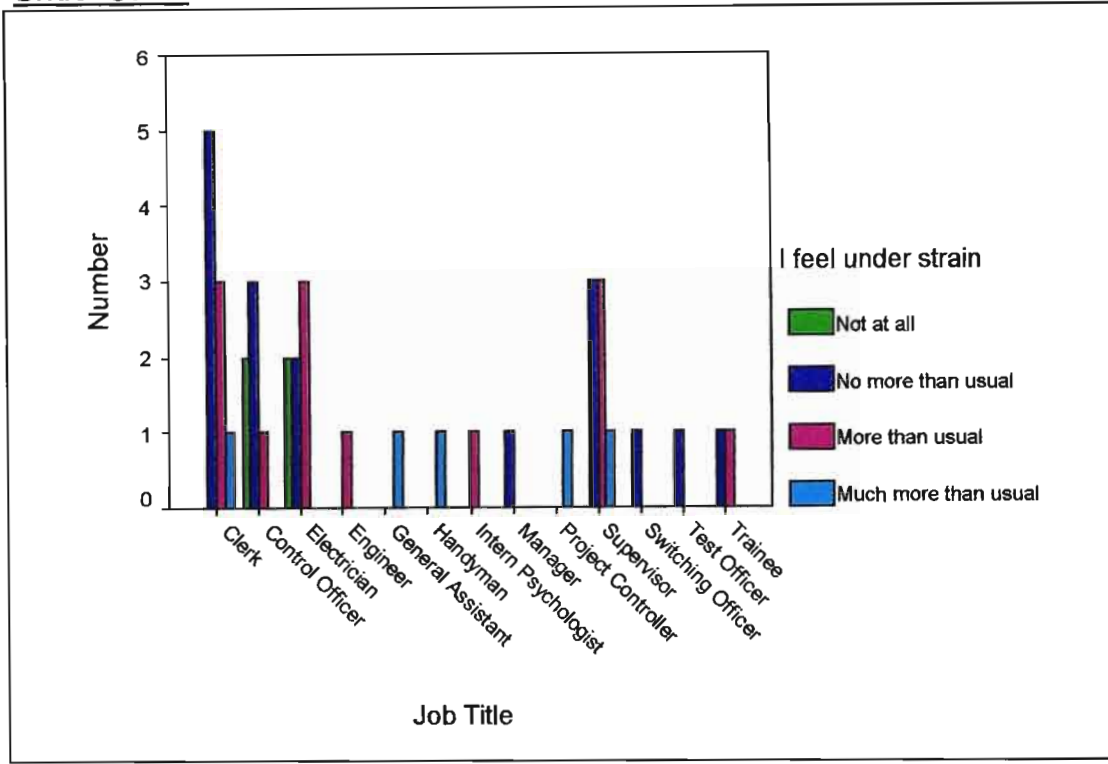
The above graph shows that two each of both control officers and electricians do not feel under strain at all.

Five clerks, three each of control officers and supervisors, two of electricians and one each of managers, switching officers, test officers and trainees, all feel that they are under no more strain than usual.

Three each of clerks, electricians and supervisors all feel that they are under rather more strain than usual, whilst one each of control officers, engineers, intern psychologists and trainees feel the same way.

One each of clerks, general assistants, handymen, project controllers and supervisors all feel that they are under much more strain than usual.

Table 4.23: Pretest: Count, Row Percentage, Column Percentage and Total Percentage of Employees Who Feel Under Strain

Count Column % Total %	I Feel Under Strain				
	Missing Observation	Not at all	No more than usual	Rather more than usual	Much more than usual
Clerk			5	3	1
			29	23	20
			13	8	3
Control Officer		2	3	1	
		50	18	8	
		5	8	3	
Electrician		2	2	3	
		50	12	23	
		5	5	8	
Engineer			1		
			7		
			3		
General Assistant					1
					20
					3
Handyman					1
					50
					3
Intern Psychologist				1	
				20	
				3	
Manager	1		1		
	100		6		
	3		3		
Project Controller					1
					20
					3
Supervisor			3	3	1
			18	23	20
			8	8	3
Switching Officer			1		
			6		
			3		
Test Officer			1		
			6		
			3		
Trainee			1	1	
			6	8	
			3	3	

Graph 9: Pretest: Number of Employees According to Job Title, Who Feel Tense
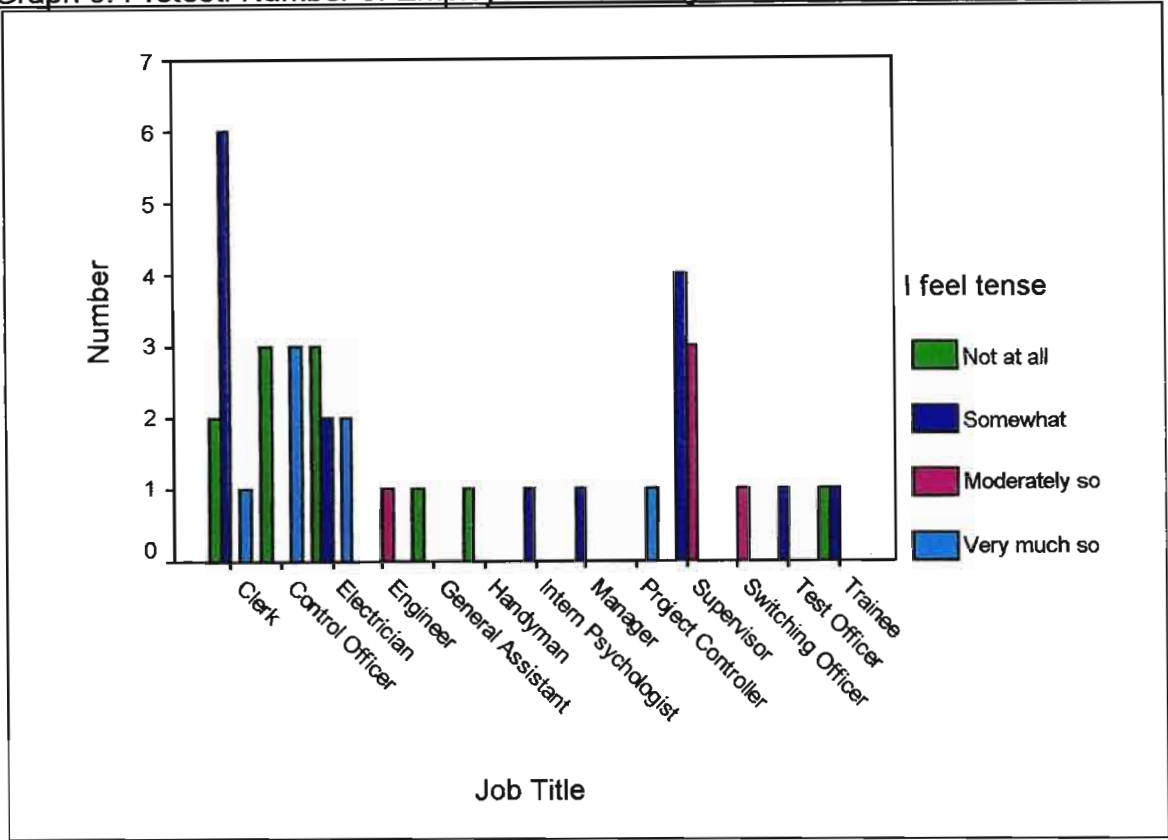
From the above graph it can be observed that two clerks, three each of control officers and electricians, and one each of general assistants, handymen, and trainees do not feel tense at all.

Six clerks, four supervisors, two electricians and one each of intern psychologists, managers, test officers and trainees all feel somewhat tense.

One each of engineers and switching officers feel moderately tense, whilst a significant three supervisors also feel moderately tense.

One each of clerks and project controllers feel very tense, whilst two electricians and three control officers feel very tense as well.

Table 4.24: Pretest: Count, Row Percentage, Column Percentage and Total Percentage of Employees Who Feel Tense

Count Column % Total %	I Feel Tense				
	Missing Observation	Not at all	Somewhat	Moderately so	Very much so
Clerk		2	6		1
		18	38		14
		5	15		3
Control Officer		3			3
		28			43
		8			8
Electrician		3	2		2
		27	13		29
		8	5		5
Engineer				1	
				20	
				3	
General Assistant		1			
		9			
		3			
Handyman		1			
		9			
		3			
Intern Psychologist			1		
			6		
			3		
Manager	1		1		
	100		6		
	3		3		
Project Controller					1
					14
					3
Supervisor			4	3	
			25	60	
			10	8	
Switching Officer				1	
				20	
				3	
Test Officer			1		
			6		
			3		
Trainee		1	1		
		9	6		
		3	3		

Graph 10: Pretest: Number of Employees According to Job Title, Who Tire Quickly
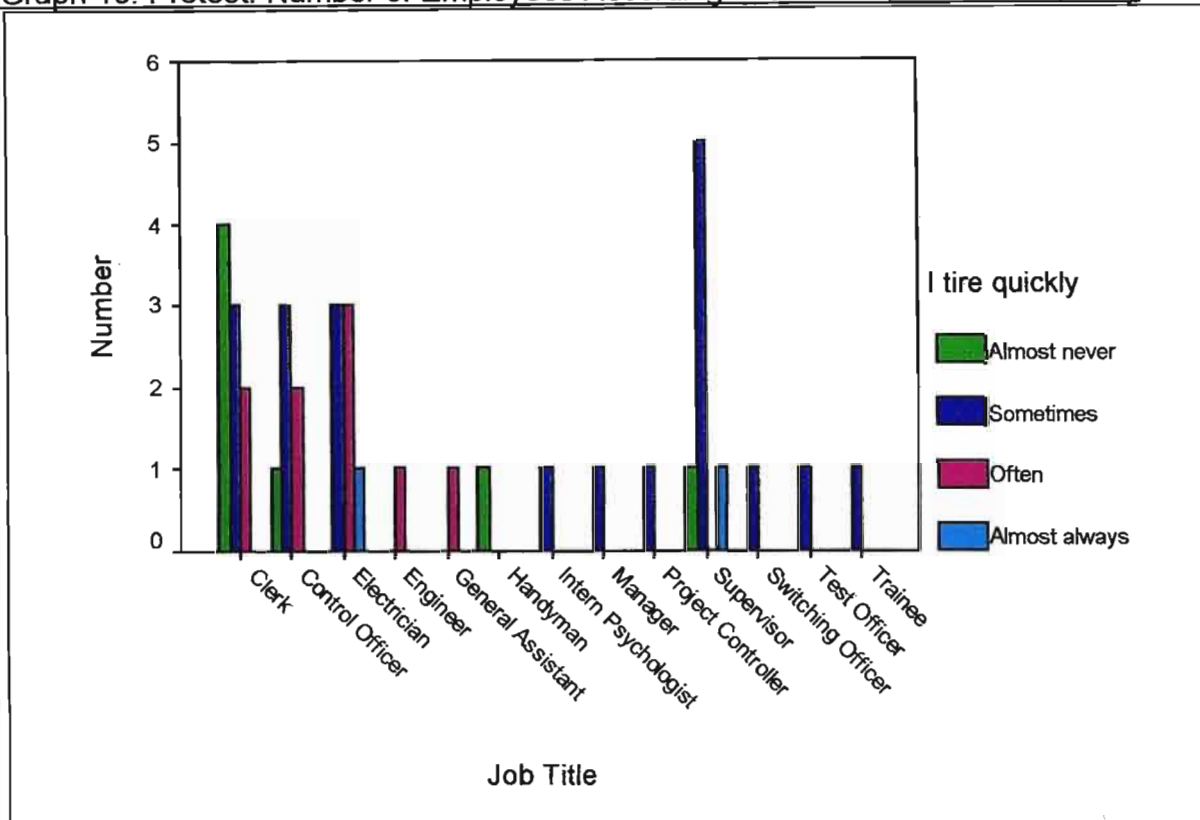
The above graph shows that four clerks and one each of control officers, handymen and supervisors find that they almost never tire quickly.

Three each of clerks, control officers, and electricians all claim that they sometimes tire quickly. In addition, one of intern psychologists, managers, switching officers, test officers and trainees also fall in this category. A significant five supervisors claim to sometimes tire quickly as well.

Those who often tire quickly comprise two each of clerks and control officers, three electricians, and one each of engineers and general assistants.

One electrician and one supervisor find that they almost always tire quickly.

Table 4.25: Pretest: Count, Row Percentage, Column Percentage and Total Percentage of Employees Who Tire Quickly

Count Column % Total %	I Tire Quickly				
	Missing Observation	Almost Never	Sometimes	Often	Almost Always
Clerk		4	3	2	
		57	15	22	
		10	8	5	
Control Officer		1	3	2	
		14	15	22	
		3	8	5	
Electrician			3	3	1
			15	33	50
			8	8	3
Engineer				1	
				11	
				3	
General Assistant				1	
				11	
				3	
Handyman		1			
		14			
		3			
Intern Psychologist			1		
			5		
			3		
Manager	1		1		
	50		5		
	3		3		
Project Controller		1			
		5			
		3			
Supervisor		1	5		1
		14	25		50
		3	13		3
Switching Officer			1		
			5		
			3		
Test Officer			1		
			5		
			3		
Trainee	1		1		
	50		5		
	3		3		

The above graph shows that four clerks, two control officers, five electricians, three supervisors and one each of switching officers and test officers all claim to feel no more unhappy than usual.

Three clerks, one each of control officers, electricians, engineers and project controllers, two supervisors, and two trainees all find that they are feeling rather more unhappy than usual.

Those that are feeling much more unhappy than usual comprise one each of clerks, general assistants, handymen, and supervisors.

Three control officers and one each of clerks, intern psychologists, managers and supervisors all say that they do not feel unhappy at all.

Table 4.26: Pretest: Count, Row Percentage, Column Percentage and Total Percentage of Employees Who Feel Unhappy

Count Column % Total %	I Feel Unhappy				
	Missing Observation	Not at all	No more than usual	Rather more than usual	Much more than usual
Clerk		1	4	3	1
		13	25	27	25
		3	10	8	3
Control Officer		3	2	1	
		38	13	9	
		8	5	3	
Electrician		1	5	1	
		13	31	9	
		3	13	3	
Engineer				1	
				9	
				3	
General Assistant					1
					26
					3
Handyman					1
					26
					3
Intern Psychologist		1			
		13			
		3			
Manager	1	1			
	100	13			
	3	3			
Project Controller			1		
			9		
			3		
Supervisor		1	3	2	1
		13	19	18	25
		3	8	5	3
Switching Officer			1		
			6		
			3		
Test Officer			1		
			6		
			3		
Trainee				2	
				6	
				3	

Graph 12: Pretest: Number of Employees According to Job Title Who Worry
Too Much
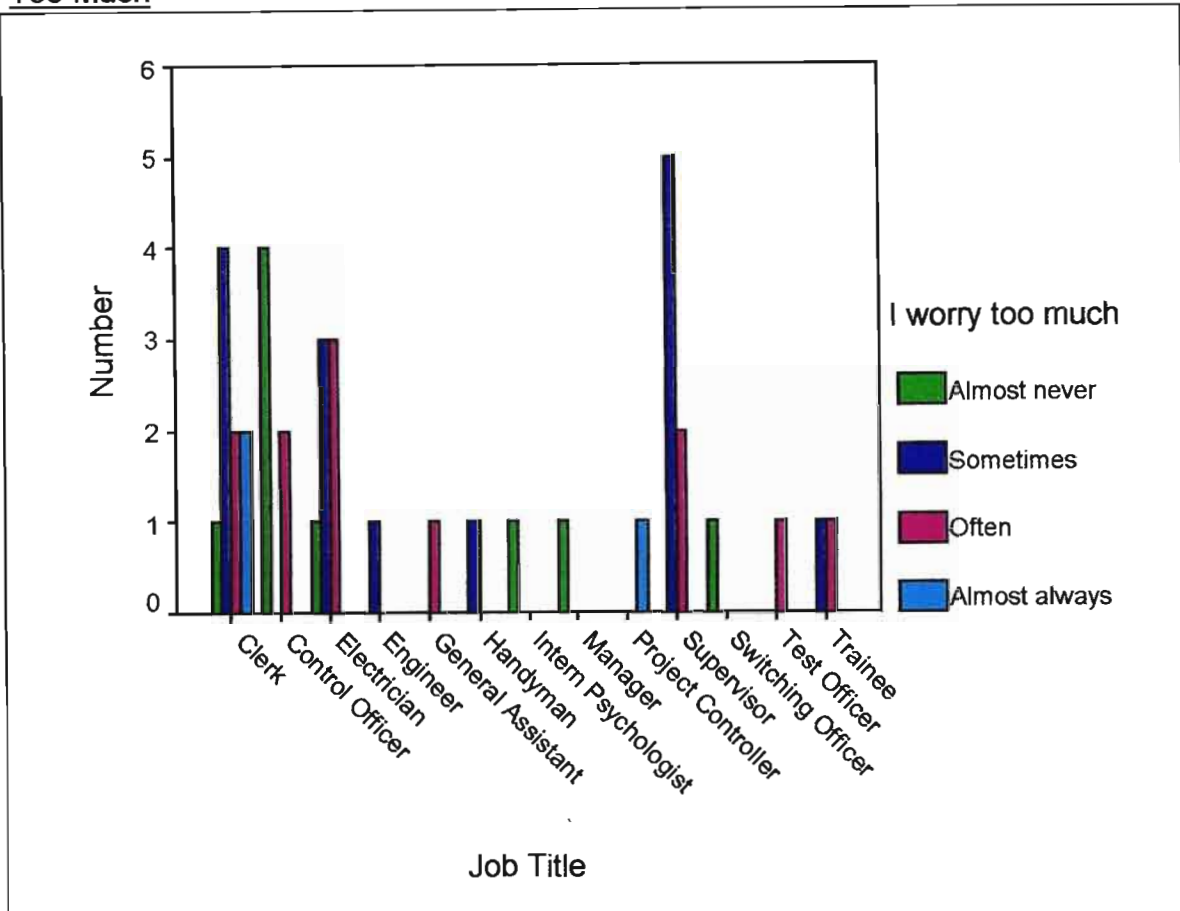
The graph above reflects one each of clerks, electricians, intern psychologists, managers and switching officers who claim to almost never worry too much. In addition, four control officers claim the same.

Four clerks, three electricians, five supervisors and one each of engineers, handymen, and trainees say that they sometimes worry too much.

Furthermore, two each of clerks, control officers, and supervisors also say that they often worry too much. This is in addition to three electricians, and one each of general assistants, test officers and trainees.

Two clerks and one project controller say that they almost always worry too much.

124

Table 4.27: Pretest: Count, Row Percentage, Column Percentage and Total Percentage of Employees Who Worry Too Much

Count Column % Total %	I Worry Too Much				
	Missing Observation	Not at all	Somewhat	Moderately so	Very much so
Clerk		1	4	2	2
		11	27	17	67
		3	10	5	5
Control Officer		4		2	
		44		17	
		10		5	
Electrician		1		3	
		11		20	
		3		8	
Engineer			1		
			7		
			3		
General Assistant				1	
				8	
				3	
Handyman			1		
			7		
			3		
Intern Psychologist		1			
		11			
		3			
Manager	1	1			
	100	7			
	3	3			
Project Controller					1
					33
					3
Supervisor			5	2	
			33	17	
			13	5	
Switching Officer		1			
		11			
		3			
Test Officer				1	
				6	
				3	
Trainee			1	1	
			7	8	
			3	3	

From the above graph, it can be observed that six clerks and five supervisors do not feel nervous at all. Four control officers and two each of electricians, test officers and trainees also have no experience of nervous feelings. In addition, one each of managers and project controllers say that they do not feel nervous at all.

Three electricians and two supervisors claim to feel somewhat nervous. Furthermore, one each of clerks, engineers, handymen and switching officers all feel somewhat nervous.

One electrician and one general assistant both find that they feel moderately nervous. In addition, two clerks and one each of control officers, electricians and intern psychologists feel very nervous.

Count Column % Total %	I Feel Nervous				
	Missing Observation	Not at all	Somewhat	Moderately so	Very much so
Clerk		6	1		2
		26	11		40
		15	3		5
Control Officer		4			1
		17			20
		10			3
Electrician		2	3	1	1
		9	33	50	20
		5	8	3	3
Engineer			1		
			11		
			3		
General Assistant				1	
				50	
				3	
Handyman			1		
			11		
			3		
Intern Psychologist					1
					20
					3
Manager	1	1			
	100	4			
	3	3			
Project Controller		1			
		4			
		3			
Supervisor		5	2		
		22	22		
		13	5		
Switching Officer			1		
			11		
			3		
Test Officer		2			
		9			
		5			
Trainee		2			
		9			
		5			

Graph 14: Posttest: Number of Employees According to Job Title Who Feel Blue
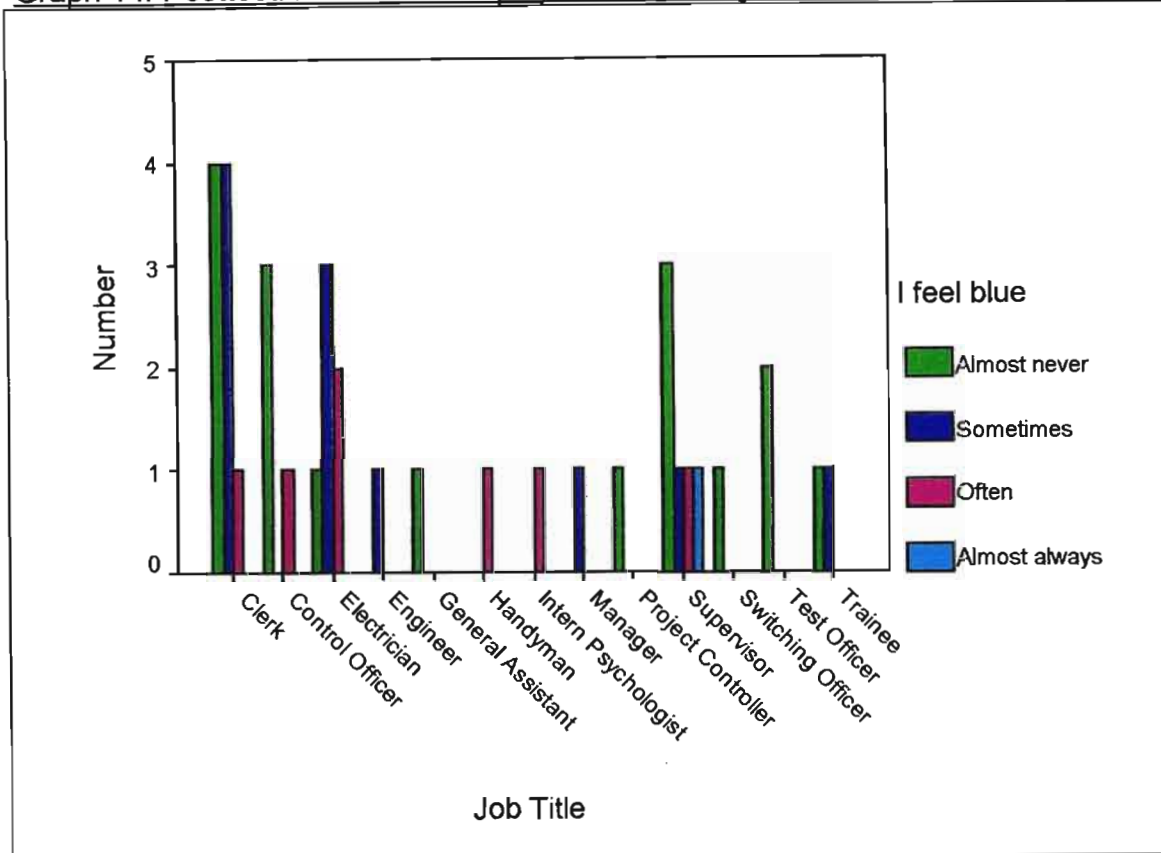
From the above graph, one can observe that four clerks say that they almost never feel blue, whilst three control officers and three supervisors say the same. One each of electricians, general assistants, project controllers, switching officers and trainees also claim to almost never feel blue. Two test officers also say they almost never feel blue.

Four clerks and three electricians say they sometimes feel blue, whilst one each of engineers, managers, supervisors and trainees also claim to sometimes feel blue.

One each of clerks, control officers, handymen, intern psychologists and supervisors say they often feel blue.

In addition to two electricians, one supervisor claims to almost always feel blue.

Table 4.29: Posttest: Count, Row Percentage, Column Percentage and Total Percentage of Employees Who Feel Blue

Count Column % Total %	I Feel Blue				
	Missing Observation	Almost never	Sometimes	Often	Almost always
Clerk		4	4	1	—
		24	36	14	
		10	10	3	
Control Officer	1	3		1	
	25	18		14	
	3	8		3	
Electrician	1	1	3	2	
	7	7	27	29	
	3	3	8	5	
Engineer			1		
			9		
			3		
General Assistant		1			
		6			
		3			
Handyman				1	
				14	
				3	
Intern Psychologist				1	
				14	
				3	
Manager	1		1		
	25		9		
	3		3		
Project Controller		1			
		6			
		3			
Supervisor	1	3	1	1	1
	25	18	9	14	100
	3	8	3	3	3
Switching Officer		1			
		6			
		3			
Test Officer		2			
		12			
		5			
Trainee		1	1		
		6	9		
		3	3		

The above graph shows that six clerks, three control officers, five electricians and four supervisors say they almost never feel like crying. Two each of test officers and trainees claim the same, along with one each of engineers, general assistants, managers, project controllers and switching officers.

Two control officers say they sometimes feel like crying. In addition, one each of electricians, handymen, intern psychologists and supervisors also feel like crying sometimes.

Two supervisors and two clerks often feel like crying, whilst one electrician often feels like crying.

Count Column % Total %	I Feel Like Crying				
	Missing Observation	Almost never	Sometimes	Often	Almost always
Clerk	1	6		2	
	50	22		40	
	3	15		5	
Control Officer		3	2		
		11	33		
		8	5		
Electrician		5	1	1	
		19	17	20	
		13	3	3	
Engineer		1			
		4			
		3			
General Assistant		1			
		4			
		3			
Handyman			1		
			17		
			3		
Intern Psychologist			1		
			17		
			3		
Manager	1	1			
	50	4			
	3	3			
Project Controller		1			
		4			
		3			
Supervisor		4	1	2	
		15	17	40	
		10	3	5	
Switching Officer		1			
		4			
		3			
Test Officer		2			
		7			
		5			
Trainee		2			
		7			
		5			

The above graph reflects one intern psychologist who almost always feels overcome by difficulties.

Three clerks, and one each of control officers, electricians, handymen and supervisors all claim that they often feel overcome by difficulties. However, two clerks and two control officers say they sometimes feel overcome by difficulties. In addition, three electricians, three supervisors and one each of engineers, project controllers and trainees all feel overcome by difficulties sometimes.

Three each of clerks, electricians and supervisors say they do not feel overcome by difficulties at all. Included in this category are two each of control officers and test officers, as well as one each of general assistants, switching officers and trainees.

Table 4.31: Posttest: Count, Row Percentage, Column Percentage and Total Percentage of Employees Who Feel Overcome by Difficulties

Count Column % Total %	I Feel Overcome by Difficulties				
	Missing Observation	Very much so	Moderately so	Somewhat	Not at all
Clerk	1	3	2	3	
	50	18	15	43	
	3	8	5	8	
Control Officer		2	2	1	
		12	15	14	
		5	5	3	
Electrician		3	3	1	
		18	23	14	
		8	8	3	
Engineer			1		
			8		
			3		
General Assistant		1			
		6			
		3			
Handyman				1	
				14	
				3	
Intern Psychologist					1
					100
					3
Manager		1	1		
		50	6		
		3	3		
Project Controller			1		
			8		
			3		
Supervisor		3	3	1	
		18	23	14	
		8	8	3	
Switching Officer		1			
		6			
		3			
Test Officer		2			
		12			
		5			
Trainee		1	1		
		6	8		
		3	3		

Graph 17: Posttest: Number of Employees According to Job Title Who Feel Happy
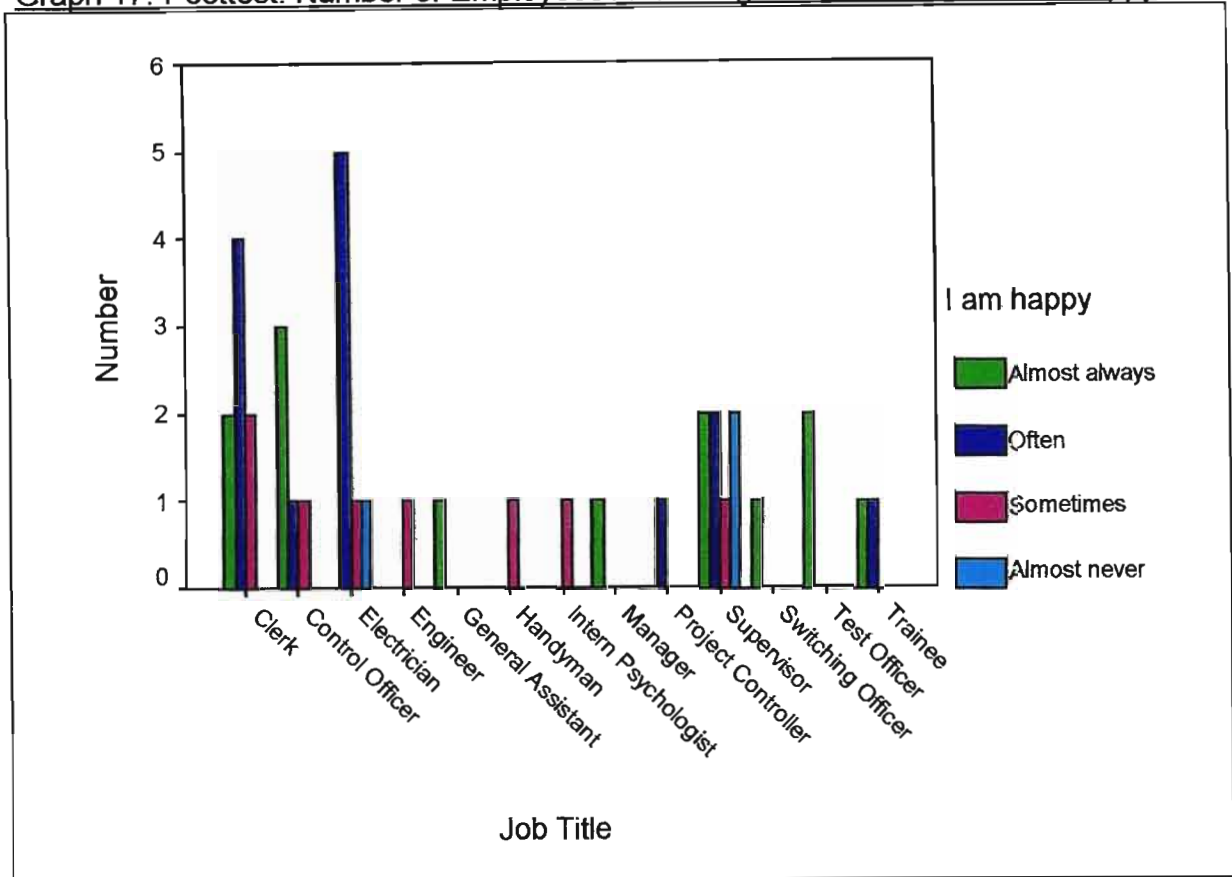
One electrician and two supervisors say that they almost never feel happy.

Two clerks, one control officer, one electrician, one engineer, one handyman, one intern psychologist and one supervisor say that they sometimes feel happy.

Five electricians, four clerks, two supervisors, and one each of control officers, project controllers and trainees all say that they often feel happy.

Those who almost always feel happy comprise of two clerks, two supervisors and two test officers, three control officers, and one each of general assistants, managers, switching officers and trainees.

Table 4.32: Posttest: Count, Row Percentage, Column Percentage and Total Percentage of Employees Who Are Happy

Count Column % Total %	I Am Happy				
	Missing Observation	Almost Always	Often	Sometimes	Almost never
Clerk	1	2	4	2	
	50	15	29	25	
	3	5	10	5	
Control Officer		3	1	1	
		23	7	13	
		8	3	3	
Electrician			5	1	1
			36	13	33
			13	3	3
Engineer				1	
				13	
				3	
General Assistant		1			
		8			
		3			
Handyman				1	
				13	
				3	
Intern Psychologist				1	
				13	
				3	
Manager	1	1			
	50	8			
	3	3			
Project Controller			1		
			7		
			3		
Supervisor		2	2	1	2
		15	14	13	67
		5	5	3	5
Switching Officer		1			
		8			
		3			
Test Officer		2			
		15			
		5			
Trainee		1	1		
		8	7		
		3	3		

The above graph shows four clerks, four electricians and four supervisors feel that they are not losing confidence in themselves at all. Three control officers and two test officers also feel the same way. In addition, one each of engineers, general assistants, managers, project controllers, switching officers and trainees also feel that they are not losing confidence in themselves at all.

Three clerks, two control officers, and one each of electricians, handymen, intern psychologists, supervisors and trainees feel that they are not losing confidence in themselves any more than usual.

However, one each of clerks, electricians and supervisors are feeling that they are losing confidence in themselves rather more than usual. Those that are feeling that they are losing confidence in themselves much more than usual comprise one each of clerks, electricians and supervisors.

Count Column % Total %	I Am Losing Confidence in Myself				
	Missing Observation	Not at all	No more than usual	Rather more than usual	Much more than usual
Clerk		4	3	1	1
		17	30	33	33
		10	8	3	3
Control Officer		3	2		
		13	20		
		8	5		
Electrician		4	1	1	1
		17	10	33	33
		10	3	3	3
Engineer		1			
		4			
		3			
General Assistant		1			
		4			
		3			
Handyman			1		
			10		
			3		
Intern Psychologist			1		
			10		
			3		
Manager	1	1			
	100	4			
	3	3			
Project Controller		1			
		4			
		3			
Supervisor		4	1	1	1
		17	10	33	33
		10	3	3	3
Switching Officer		1			
		4			
		3			
Test Officer		2			
		9			
		5			
Trainee		1	1		
		4	10		
		3	3		

An observation of the above graph shows that one clerk, one control officer, one engineer, one general assistant, one handyman and one trainee all feel somewhat pleasant. Two electricians and two supervisors also feel somewhat pleasant.

Another two each of clerks, control officers, electricians and supervisors all feel moderately pleasant, whilst one each of intern psychologists and managers feel the same way.

Six clerks feel very pleasant. In addition to this category are two each of control officers, electricians, supervisors and test officers. One each of project controllers, switching officers and trainees also feel very pleasant.

However, one each of electricians and supervisors do not feel pleasant at all.

Table 4.34: Posttest: Count, Row Percentage, Column Percentage and Total Percentage of Employees Who Feel Pleasant

Count Column % Total %	I Feel Pleasant				
	Missing Observation	Very much so	Moderately so	Somewhat	Not at all
Clerk		6	2	1 —	
		35	20	10	
		15	5	3	
Control Officer		2	2	1	
		12	20	10	
		5	5	3	
Electrician		2	2	2	1
		12	20	20	33
		5	5	5	3
Engineer				1	
				10	
				3	
General Assistant				1	
				10	
				3	
Handyman				1	
				10	
				3	
Intern Psychologist				1	
				10	
				3	
Manager	1		1		
	100		10		
	3		3		
Project Controller		1			
		6			
		3			
Supervisor		2	2	2	1
		12	20	20	50
		5	5	5	3
Switching Officer		1			
		6			
		3			
Test Officer		2			
		12			
		5			
Trainee		1		1	
		6		10	
		3		3	

Graph 20: Posttest: Number of Employees According to Job Title Who Feel
Under Strain
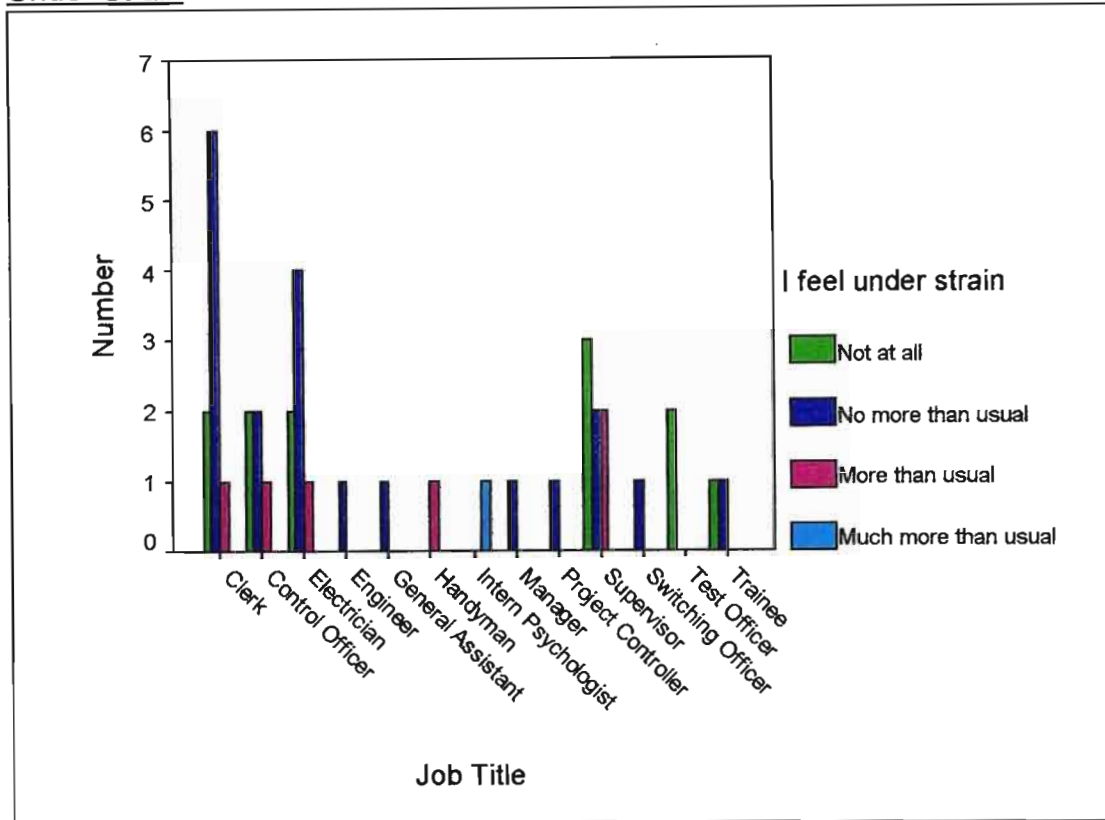
The above graph shows that two each of clerks, control officers, electricians and test officers do not feel under strain at all. In addition to this, three supervisors and one trainee does not feel under strain at all.

Six clerks, two each of control officers and supervisors, four electricians and one each of engineers, general assistants, managers, project controllers, switching officers and trainees all feel that they are under no more strain than usual.

However, two supervisors, and one each of clerks, control officers, electricians and handymen feel that they are under rather more strain than usual.

One intern psychologist feels under more strain than usual.

Count Column % Total %	I Feel Under Strain				
	Missing Observation	Not at all	No more than usual	Rather more than usual	Much more than usual
Clerk		2	6	1	
		17	30	17	
		5	15	3	
Control Officer		2	2	1	
		17	10	17	
		5	5	3	
Electrician		2	4	1	
		17	20	17	
		5	10	3	
Engineer			1		
			5		
			3		
General Assistant			1		
			5		
			3		
Handyman				1	
				17	
				3	
Intern Psychologist					1
					100
					3
Manager	1		1		
	100		5		
	3		3		
Project Controller			1		
			5		
			3		
Supervisor		3	2	2	
		25	20	33	
		8	5	5	
Switching Officer			1		
			5		
			3		
Test Officer		2			
		17			
		5			
Trainee		1	1		
		8	5		
		3	3		

Graph 21: Posttest: Percentage of Employees According to Job Title Who Feel Tense
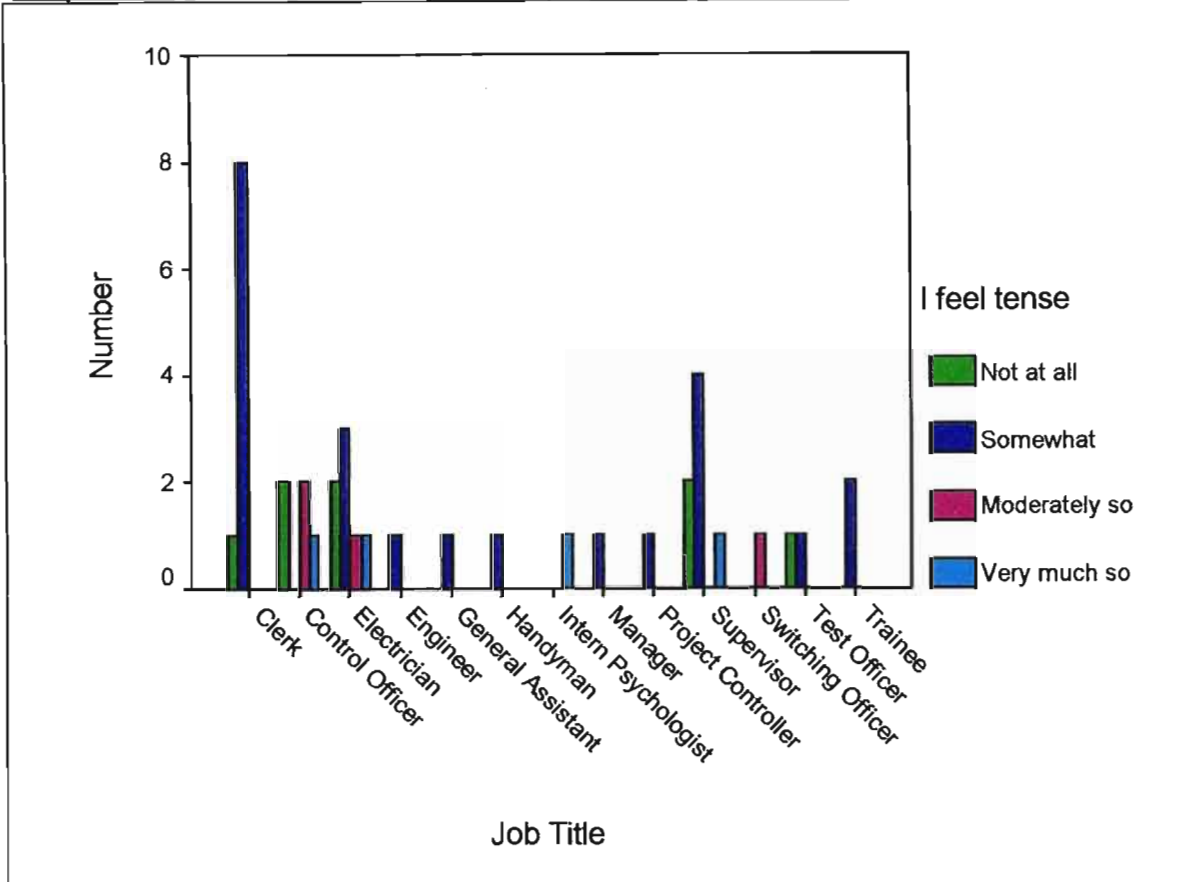
From the above graph it can be observed that one each of clerks and test officers do not feel tense at all. Two each of control officers, electricians and supervisors also fall into this category.

Eight clerks, three electricians, four supervisors, two trainees, and one each of engineers, general assistants, handymen, managers, project controllers and test officers all feel somewhat tense.

Those employees that are moderately tense comprise two control officers and one each of electricians and switching officers.

One each of control officers, electricians, intern psychologists, and supervisors all feel very tense.

Table 4.36: Posttest: Count, Row Percentage, Column Percentage and Total Percentage of Employees Who Feel Tense

Count Column % Total %	I Feel Tense				
	Missing Observation	Not at all	Somewhat	Moderately so	Very much so1
Clerk		1	8		
		17	35		
		3	20		
Control Officer		2		2	1
		25		50	25
		5		5	3
Electrician		2	3	1	1
		25	13	25	25
		5	8	3	3
Engineer			1		
			4		
			3		
General Assistant			1		
			4		
			3		
Handyman			1		
			4		
			3		
Intern Psychologist	.				1
					25
					3
Manager	1		1		
	100		4		
	3		3	.	
Project Controller			1		
			4		
			3		
Supervisor		2	4		1
		25	17		25
		5	10		3
Switching Officer				1	
				25	
				3	
Test Officer		1	1		
		13	4		
		3	3		
Trainee			2		
			9		
			5		

The graph above shows that one each of clerks, general assistants and trainees have claimed to almost never tire quickly. In addition, two each of control officers, electricians, supervisors and test officers claim the same.

Five clerks say they sometimes tire quickly. In addition, four supervisors and one each of handymen, managers, switching officers and trainees also claim to tire quickly.

One each of control officers, engineers and intern psychologists say that they often tire quickly, whilst three electricians say the same.

One supervisor says they almost always tire quickly.

Table 4.37: Posttest: Count, Row Percentage, Column Percentage and Total Percentage of Employees Who Tire Quickly

Count Column % Total %	I Tire Quickly				
	Missing Observation	Almost never	Sometimes	Often	Almost always
Clerk	1	1	7	—	
	50	9	35		
	3	3	18		
Control Officer		2	2	1	
		18	10	17	
		5	5	3	
Electrician		2	2	3	
		18	10	50	
		5	5	8	
Engineer				1	
				17	
				3	
General Assistant		1			
		9			
		3			
Handyman			1		
			5		
			3		
Intern Psychologist				1	
				17	
				3	
Manager	1		1		
	50		5		
	3		3		
Project Controller			1		
			5		
			3		
Supervisor		2	4		1
		18	20		100
		5	10		3
Switching Officer			1		
			5		
			3		
Test Officer		2			
		18			
		5			
Trainee		1	1		
		9	5		
		3	3		

An observation of the graph above shows that four clerks and four supervisors are not at all unhappy. Two each of control officers and test officers are also not unhappy. The same applies to the three electricians and one each of managers, project controllers and trainees.

Four clerks feel that they are not unhappy any more than usual. The same applies to three control officers, two electricians and one each of engineers, general assistants, handymen and switching officers.

However, two each of electricians and supervisors find that they are rather more unhappy than usual, whilst one each of intern psychologists and trainees feel the same way.

One clerk and one supervisor feel much more unhappy than usual.

Table 4.38: Posttest: Count, Row Percentage, Column Percentage and Total Percentage of Employees Who Feel Unhappy

Count Column % Total %	I Feel Unhappy				
	Missing Observation	Not at all	No more than usual	Rather more than usual	Much more than usual
Clerk		4	4		1
		22	31		50
		10	10		3
Control Officer		2	3		
		11	23		
		5	8		
Electrician		3	2	2	
		17	15	33	
		8	5	5	
Engineer			1		
			8		
			3		
General Assistant			1		
			9		
			3		
Handyman			1		
			8		
			3		
Intern Psychologist				1	
				17	
				3	
Manager	1	1			
	100	6			
	3	3			
Project Controller		1			
		6			
		3			
Supervisor		4		2	1
		22		33	50
		10		5	3
Switching Officer			1		
			8		
			3		
Test Officer		2			
		11			
		5			
Trainee		1		1	
		6		17	
		3		3	

The above graph shows three clerks, three electricians and three supervisors who claim
to almost never worry too much. Two control officers and one each of general
assistants, switching officers and test officers claim the same.

Three clerks, two control officers and one each of electricians, engineers, project
controllers and trainees all state that they sometimes worry too much.

Those who say they often worry too much comprise two clerks, one each of control
officers, handymen and test officers, and three electricians.

One intern psychologist and three supervisors say that they almost always worry too
much.

Table 4.39: Posttest: Count, Row Percentage, Column Percentage and Total Percentage of Employees Who Worry Too Much

Count Column % Total %	I Worry Too Much				
	Missing Observation	Almost never	Sometimes	Often	Almost always
Clerk	1	3	3	2	—
	50	19	30	25	
	3	8	8	5	
Control Officer		2	2	1	
		13	20	13	
		5	5	3	
Electrician		3	1	3	
		19	10	38	
		8	3	8	
Engineer			1		
			10		
			3		
General Assistant		1			
		6			
		3			
Handyman				1	
				13	
				3	
Intern Psychologist					1
					25
					3
Manager	1	1			
	50	6			
	3	3			
Project Controller			1		
			10		
			3		
Supervisor		3	1		3
		19	10		75
		8	3		8
Switching Officer		1			
		6			
		3			
Test Officer		1		1	
		6		13	
		3		3	
Trainee		1	1		
		6	10		
		3	3		

4.5. T-test Results

Table 4.40.1: T-test Results for Paired Samples of Variable "I Feel Nervous"

Variable	No. of Pairs	Correlation	2-tail Significance	Mean	Standard Deviation	SE of Mean
I feel nervous (A)				1.9744	-1.038	.166
	39	.379	.017			
I feel nervous (B)				1.7179	1.050	.168

Table 4.40.2: Paired Differences of Variable " I feel Nervous"

Mean	SD	SE of Mean	t-value	df	2-tail significance
.2564	1.163	.186	1.38	38	.177

95% CI (-.121, .634)

Table 4.41.1: T-test Results for Paired Samples of Variable "I feel blue"

Variable	No. of Pairs	Correlation	2-tail Significance	Mean	Standard Deviation	SE of Mean
I feel blue (A)				2.0000	.739	.127
	34		.025			
I feel Blue (B)				1.8529	.857	.147

Table 4.41.2: Paired Differences of Variable "I feel blue"

Mean	SD	SE of Mean	t-value	df	2-tail significance
.1471	.892	.153	.96	33	.343

95% CI (-.164, .458)

Table 4.42.1: T-test Results for Paired Samples of Variable "I feel like crying"

Variable	No. of Pairs	Correlation	2-tail Significance	Mean	Standard Deviation	SE of Mean
I feel like crying (A)				1.6579	.815	.132
	38	.666	.000			
I feel like crying (B)				1.4211	.722	.117

150

Table 4.42.2: Paired Differences of Variable "I feel like crying"

Mean	SD	SE of Mean	t-value	df	2-tail significance
.2368	.634	.103	2.30	37	.027

95% CI(.028, .445)

Table 4.43.1: T-test Results for Paired Samples of Variable "I feel overcome by difficulties"

Variable	No. of Pairs	Correlation	2-tail Significance	Mean	Standard Deviation	SE of Mean
I feel overcome by difficulties (A)				2.3243	.944	.155
	37	.497	.002			
I feel overcome by difficulties (B)				1.8108	.845	.139

Table 4.43.2: Paired Differences of Variable "I feel overcome by difficulties"

Mean	SD	SE of Mean	t-value	df	2-tail significance
.5135	.901	.148	3.47	36	.001

95% CI (.213, .814)

Table 4.44.1: T-test Results for Paired Samples of Variable "I feel happy"

Variable	No. of Pairs	Correlation	2-tail Significance	Mean	Standard Deviation	SE of Mean
I feel happy (A)				2.4737	.830	.135
	38	.329	.044			
I feel Happy (B)				2.0263	.944	.153

Table 4.44.2: Paired Differences of Variable "I feel happy"

Mean	SD	SE of Mean	t-value	df	2-tail significance
.4474	1.032	.167	2.67	37	.011

95% CI (.108, .787)

Table 4.45.1: T-test Results for Paired Samples of Variable "I am losing confidence"

Variable	No. of Pairs	Correlation	2-tail Significance	Mean	Standard Deviation	SE of Mean
Losing confidence (A)				1.8462	.875	.140
	39	.512	.001			
Losing confidence (B)				1.6410	.932	.149

Table 4.45.2: Paired Differences of Variable "I am losing confidence"

Mean	SD	SE of Mean	t-value	df	2-tail significance
.2051	.894	.143	1.43	38	.160

95% CI (-.085, .495)

Table 4.46.1: T-test Results for Paired Samples of Variable "I feel pleasant"

Variable	No. of Pairs	Correlation	2-tail Significance	Mean	Standard Deviation	SE of Mean
I feel pleasant (A)				2.2821	.826	.132
	39	.528	.001			
I feel pleasant (B)				1.9231	.957	.153

Table 4.46.2: Paired Differences of Variable "I feel pleasant"

Mean	SD	SE of Mean	t-value	df	2-tail significance
.3590	.873	.140	2.57	38	.014

95% CI (.076, .642)

Table 4.47.1: T-test Results for Paired Samples of Variable "I feel under strain"

Variable	No. of Pairs	Correlation	2-tail Significance	Mean	Standard Deviation	SE of Mean
I feel under strain (A)				2.4872	.854	.137
	39	.447	.004			
I feel under strain (B)				1.8974	.754	.121

Table 4.47.2: Paired Differences of Variable "I feel under strain"

Mean	SD	SE of Mean	t-value	df	2-tail significance
.5897	.850	.136	4.33	38	.000

95% CI (.314, .865)

Table 4.48.1: T-test Results for Paired Samples of Variable "I feel tense"

Variable	No. of Pairs	Correlation	2-tail Significance	Mean	Standard Deviation	SE of Mean
I feel tense (A)				2.2564	1.044	.167
	39	.429	.006			
I feel tense (B)				2.1282	.864	.138

Table 4.48.2: Paired Differences of Variable "I feel"

Mean	SD	SE of Mean	t-value	df	2-tail significance
.1282	1.031	.165	.78	38	.442

95% CI (-.206, .462)

Table 4.49.1: T-test Results for Paired Samples of Variable "I tire quickly"

Variable	No. of Pairs	Correlation	2-tail Significance	Mean	Standard Deviation	SE of Mean
I tire quickly (A)				2.1351	.787	.129
	37	.541	.001			
I tire quickly (B)				1.9730	.726	.119

Table 4.49.2: Paired Differences of Variable "I tire quickly"

Mean	SD	SE of Mean	t-value	df	2-tail significance
.1622	.727	.120	1.36	36	.183

95% CI (-.080, .405)

Table 4.50.1: T-test Results for Paired Samples of Variable "I feel unhappy"

Variable	No. of Pairs	Correlation	2-tail Significance	Mean	Standard Deviation	SE of Mean
I feel unhappy (A)				2.2821	.916	.147
	39	.291	.072			
I feel unhappy (B)				1.8205	.885	.142

Table 4.50.2: Paired Differences of Variable "I feel unhappy"

Mean	SD	SE of Mean	t-value	df	2-tail significance
.4615	1.072	.172	2.69	38	.011

95% CI (.114, .809)

Table 4.51.1: T-test Results for Paired Samples of Variable "I worry too much"

Variable	No. of Pairs	Correlation	2-tail Significance	Mean	Standard Deviation	SE of Mean
I worry too much (A)				2.1842	.926	.150
	38	.309	.059			
I worry too much (B)				2.0000	1.040	.169

Table 4.51.2: Paired Differences of Variable "I worry too much"

Mean	SD	SE of Mean	t-value	df	2-tail significance
.1842	1.159	.188	.98	37	.334

95% CI (-.197, .565)

Chapter Five

Discussion of Results

5.0. Introduction

This chapter will focus on the analysis of the qualitative and quantitative data presented in Chapter Four.

For the quantitative data, twelve different variables were chosen for analysis. Each variable can be linked to the perceived stressors mentioned by Durban Metro Electricity employees, such as management problems; safety issues at work; staff problems and attitudes of staff; stressful work tasks; general job / career stress; physical stress; emotional stress; and cognitive stress.

A t-test was conducted on each variable, and the resulting t-test score was then used to ascertain the increase or decrease of stress of that particular variable. A score of less than 0.05 implied that there is a significant difference in the pretest and posttest scores. The mean of both the pretest and posttest was then analysed to determine the increase or decrease of that particular variable. An increase from pretest to posttest in the mean score reflected a rise in stress levels, whilst a decrease in the mean score reflected a drop in stress levels.

The qualitative data analysis involved categorizing and coding the information from the General Information Questionnaire. Five different categories emerged with regard to what employees perceive as stressors. A further three categories emerged with regard to the employees' perceived effects of stress: physical, emotional, and cognitive.

5.1. Qualitative Data

As mentioned in Chapter Four, there are five different themes that emerged when analysing the perceived stressors of the sample:

i. Management problems

ii. Safety at work

iii. Staff problems and attitudes of staff

iv. Stressful work tasks

v. General job / career stress

5.1.1. Management Problems

A significant 25% of employees mentioned problems with management. It is perceived by employees that management are not playing a useful role in managing the employees. Management are seen as inadequate and inefficient.

To quote some employees:

" management cannot solve work-related problems in the office and they therefore take the authority of the staff away..."

" there is inadequate management as management do not accept responsibility for problems and refuse to take corrective action to solve problems .... staff problems are irrelevant."

The first quote implies that management is autocratic and dictatorial in their style. A dictatorial approach entails the manager telling subordinates what to do without any discussion with the subordinate. This approach may have an advantage with regard to the speed with which the work is done. The disadvantage of such an approach is that there is no use being made of the employees' skills in problem-solving, and there is no request being made for workers to take initiative in applying their knowledge to solve a problem (Bennet, 1994). Such lack of control over work is related also to poor

156

communication between superiors and subordinates (Dew, 1998, and Williams, 1994). Hence, many employees may not develop to their maximum potential. They are hindered by work problems, lack of communication, and a lack of authority to solve such problems.

The concept of participation has a role to play in facilitating a solution to such a problem. According to the Human Relations approach, participation of employees in decisions that affect their working lives is crucial for effective management. Such participation can occur through management-worker negotiating committees, suggestion schemes, worker directors on the company board, autonomous work groups or teams, financial participation, and joint consultation (Bennet, 1994).

According to Senge (1990), the concept of openness is just as crucial. He speaks of an organisation as having a political environment where superiors build and wield power, and so determine the fate of others. Senge (1990) feels that employees should challenge such autocratic behaviour, and challenge the hold that such organisational politics has over them. To do this, however, both superiors and subordinates have to be willing to co-operate with one another and come together to build a shared vision. This requires people to go beyond their own self-interests and to contribute towards creating a non-political environment where everyone can openly and honestly speak of their views and opinions about important issues. This is called participative openness.

In addition to this, Senge (1990) advocates reflective openness, which is the capacity to continually challenge one's own thinking. One also needs to constantly remember that someone else may be right. However, these skills take time and patience to develop.

In the meanwhile, it is suggested by the researcher, that negotiating committees, autonomous work groups or teams, financial participation, worker directors on the

157

company board, suggestion schemes and management-worker negotiation committees can be used as vehicles toward openness. Such participation should be seen as a basis for both subordinates and superiors to be learning in organisations.

Once such structures are in place, employees can voice their complaints, such as those mentioned in chapter four:

- Wanting more guidance from management regarding new equipment;
- Autocratic managers affect positivity and planning in the work environment;
- Managers' expectations are too high - there is an overload of tasks from the manager;
- Promises not kept by manager when it comes to career pathing;
- Management decisions are problematic, and
- Inability of management to control staff.

5.1.2. Safety at Work

The issue of problems with safety at work is a complex one. Often the job requirements of electricians demand that they do take some risk with regard to their health as they are dealing with a potentially dangerous medium such as electricity.

However, even though it is a chosen career path, eight electrician and switching officer employees cited work stress when dealing with electrical problems. It is here that one needs to take into account the theory of the person - environment job fit to see if the person's skills actually fit with the job requirements, as well as if the job environment provides the resources to fulfill the person's needs.

No matter how well the fit between the person and the job, it is inevitable that a potentially dangerous situation will cause some anxiety within employees. The specific stress - inducing problems are:

- Working with switching electricity;

- Engaging in high voltage switching with semi-skilled workers;
- Supervisors who are responsible for the safety of their subordinates are also stressed when dealing with switching electricity;
- Supervisors having to make decisions that impact on their own and their subordinates' safety when dealing with electrical problems;
- Sudden electrical tripouts are stressful when daily work is in progress;
- Bad weather conditions such as rain are also stressful when working with electricity;
- Switching officers patrolling overhead lines are stressed, and
- Working in dangerous areas is also stressful.

The above stress-inducing problems all cause anxiety within employees. Anxiety is an emotional response to a threatening situation or object. It prepares the body for the flight or fight syndrome. It is a normal reaction to stressful situations and it can be seen as useful as it increases an individual's alertness, causes them to take important things seriously, and it motivates change and development within the individual (Palmer & Dryden, 1995). Hence, anxiety can be beneficial to an employee in a stressful situation.

Anxiety only becomes problematic if it is unmanaged or out of control. Constant and deep-seated anxiety can be the most serious consequence of long-term exposure to stress. An effective way of dealing with such anxiety is to develop 'coping imagery'. Here, the counsellor guides the individual into picturing themselves coping well in a difficult or stressful situation. However, it must be remembered that the individual should see themselves dealing adequately, and not perfectly, with the situation within their own capabilities. This emphasis on realism allows for the individual to feel less performance anxiety in stressful situations (Palmer & Dryden, 1995). Through such counselling, the employee can develop an internal locus of control, thus changing their perception of the stressor into something less threatening. This leads to a reduction in anxiety.

In addition to this, the company can provide constant training. Such training will help employees deal with electrical problems so that they feel well-equipped and able to cope in such situations. It is advisable to implement the necessary new technology so as to improve safety conditions. In addition, it is advantageous to allow for only skilled workers to be involved in switching, as semi-skilled workers may pose a threat to the efficiency and safety of such precise work. Furthermore, the company should ensure that workers are not tired when doing such dangerous work as tiredness can lead to mistakes and possible hazards and health risks.

Another significant safety issue is when electricians have to go into dangerous areas that are rife with crime. Four employees spoke of 'township work', 'working in problem areas', and 'unsafe areas' as a source of stress.

Therefore, for this particular job, it is required that the employee know how to deal with the electrical problems as well as how to deal with situations with criminals that could be dangerous and life threatening.

In this particular situation where lack of safety is a source of stress, it can be said that, according to the person-environment job fit theory, the work environment is not providing the safety resources to meet the safety needs of the individual. This becomes a source of anxiety and stress for the employee.

The organisation can contribute toward protecting employees by equipping them with self-defense skills. In addition, the employees should have constant contact with headquarters via cellular phones or radio, so as to alert them when encountering trouble. Such measures may ease the anxiety of the employees as they will not feel alone in such dangerous situations. It is for the benefit of the organisation to provide safety and security measures for these employees when they go out into such dangerous areas.

The concept of coping imagery can also be applied here, so as to help uplift the perceptions of employees.

A similar message was conveyed in the Stress Management Programme (SMP). Employees were taught that they had a choice as to how they responded to a situation. If they placed the blame for the stress externally (blaming something in the outside environment) they would not be able to reduce stress. However, if they made the change within themselves, they would be able to overcome stress to a larger degree. This is termed 'positive self-control'. Here, responsibility for oneself is seen as crucial. An individual is seen to exert a degree of control on the outcomes of his / her own life. They have to be aware of how their thinking affects or impacts upon the consequences of their actions in their lives.

5.1.3. Problems with Staff and Staff Attitudes

The problem of staff and staff attitudes is also significantly mentioned by employees. Twelve employees cited the attitudes and behaviour of their colleagues and their superiors to be problematic. Several employees spoke of the fact that once authority had been taken away, many staff did as they pleased. There is also mention of negativity of staff, problems in dealing with staff (on the part of supervisors), incompetent staff, insensitivity of staff, shortage of staff, difficulties with bosses or managers, and undisciplined staff.

The above issues imply that there is little effective communication and /or structural (hierarchical) problem solving occurring interpersonally amongst staff themselves, as well as between staff and managers.

Communication that is effective aids in uniting an organisation. Employees are then fully aware of management's requirements and intentions, and management are aware of what is happening at a grassroots level (Bennet, 1994).

Possible barriers to good communication could be the inability of people to listen to one another and a lack of desire to co-operate with one another. It is therefore up to management to ensure that their leadership style is democratic rather than autocratic, and to implement a communication methods that are open and democratic (Hollway, 1997).

Organisational culture has shifted recently toward allowing the individual employee lower down in the hierarchy to take more responsibility and initiative. Decisions taken correctly at these levels would result in a quicker response to the market, more flexibility, and therefore a more competitive organisation. As a result, the individual is now the target. It is also necessary, therefore, that such individuals low down in the hierarchy accept and apply the company's values and are in harmony with its culture (Hollway, 1997).

The above implies that the most successful organisations today are those that have the ability to learn faster than their competitors. However, it is not enough to have just one person or one level of the organisation learning. Learning needs to take place at all levels of the organisation.

Senge (1990) agrees with this. He states that in a traditional organisation where there is a hierarchy, the top level management do the thinking and the local (lower) levels act upon the thinking. However, he advocates an organisation where there is a merging of thinking and acting in every individual. Senge (1990) supports this by saying that employees on the local level are crucial to an organisation as they have more current information on customer preferences, competitor actions, and market changes, and they are in a better position to manage the continuous adaptation that change demands.

Senge (1990) says that many managers may feel hesitant to allow greater authority and

control of decision-making to subordinate employees as they fear the loss of power as well as the loss of their usefulness and importance. However, they should realise that they still have a responsibility in enhancing and improving the organisation and its employees' capacity for learning more and doing more. The traditional rigid authoritarian hierarchies suppress learning. This results in demotivation and a lack of job satisfaction, hence the negativity amongst the employees.

Based upon the above, it can be said that the building of an open, democratic, communicative and learning culture in an organisation rests on the effort of managers. The management at Durban Metro Electricity need to take this into account. It is managers that have to guide and teach employees to continually expand their capacities to understand complexity, clarify vision, and improve the shared mental models (internal images of how the world works, assumptions, familiar ways of thinking and acting). Therefore, managers have to inspire the rest of the organisation.

Another strategy to improve communication and interaction amongst staff is to form teams. A team is a group of employees who work together in order to achieve group objectives. Team members are ideally interdependent and each person in the team has an important role to play in achieving the team goal. A leader of the team may or may not be elected. This is according to the requirements of the team members (Bennet, 1994). If teams already exist, it is essential to determine why they are not functioning effectively.

For the team to be effective, it is important that they have a commonality of direction. If different team members have different goals, different values and different perceptions, then they will be working at cross-purposes. They will be unaligned and their energy will be wasted (Senge, 1990). This seems to be the case with the DME staff at present, as there are complaints that the staff do as they please, some spend too much time doing one task, leaving more work for others to do, hence not taking enough

responsibility. Other criticisms are that demands by superiors are unreasonable, and yet others say that the staff are insensitive toward others.

If it is possible to bring these employees together and to bring about a shared vision amongst them that is an extension of their personal visions, then a commonality of purpose can be established and an effective team can be formed. Team learning can therefore emerge. This is the process of aligning and developing the capacity of the team to bring about the goals that the team members want. The philosophy behind team learning is that collectively, people can be more insightful and more intelligent than they can be individually (Senge, 1990). Therefore, the competency of the employees can be improved, along with their productivity and quality.

An added advantage to employees is that team structures help to break down the traditional hierarchical structures and work systems and they give employees the freedom to grow and improve themselves. Employees also feel that they are able to control and manage themselves to really make a difference when they are in teams. Therefore, teams may also facilitate the overall job satisfaction of employees. In addition, teams help to reduce conflict between management and labour, and help to improve organisational adaptability and flexibility, increase innovation, reduce turnover and absenteeism, and reduce costs (Bennet, 1994, and Senge, 1990).

However, it is not expected that the team will always work harmoniously. Many conflicts may occur within the group due to:

- Personal disputes;
- Changing expectations of reasonable demands from members;
- Divisions of labour among group members;
- Different perceptions of group objectives, and
- Breakdowns in communication between group members.

Once any of the above occurs, a readjustment is needed in the internal group relations, which might require compromises on behalf of some or all members, domination of the team by a single, widely accepted person, and / or integration, where a new approach to the problem is introduced and no person has to make sacrifices (Bennet, 1994).

In addition, a process called integrative bargaining may be used, where parties in dispute come together for a win-win solution. However, this requires trust and openness as well as co-operation, so that the source of conflict can be identified and alternatives can be explored to determine the best solution for everyone. It is important that a common organisational purpose be established so that team members identify with one another and try to reconcile differing aims and objectives. It is possible to achieve such a conflict-free culture within the organisation if the management and supervisory style is supportive and suitable to common purpose. Therefore, the flat structure of the organisation and its hierarchy is key. If there is a misfit between the organisational culture and the organisational structure, this can lead to stress, frustration and employee demotivation (Bennet, 1994, and Senge, 1990).

5.1.4. Stressful Work Tasks

The fourth problem that is perceived by employees to be stress-inducing entails the different work tasks that some employees experience.

Many clerks have found that routine clerical work, filing, paperwork, sorting of others' errors, binding time sheets, answering telephones and dealing with the public are all extremely stressful tasks. In addition to this the requirement of clerks having to sit all the time is also perceived as stressful.

It is important to apply the theory of the person-environment job fit, so as to ascertain whether the employee can meet the demands of the job, as well as to determine whether the job environment is providing enough resources to meet the individual's

165

needs (McMichael & Van Harrison, in Cooper & Payne, 1979).

It seems as if clerks are complaining of work underload when they speak of routine clerical work, repetitive filing, binding of time sheets, paper work, and answering of telephones. Trainees also complain of not being given enough work. Work underload can be quite stressful as workers become bored and frustrated with doing the same monotonous work tasks over and over again. In addition to this, employees may feel alienated from their work if they feel that it is not a relevant and important part of their lives. Alienated workers then perceive themselves as powerless and dominated. This results in unhappiness and stress (Bennet, 1994).

In contrast to this, some clerks mention having to deal with the public and a large number of queries regarding electricity supply, as well as dealing with people on short notice, and sitting for long periods of time. Supervisors also speak of stress on the job due to being given extra work even when their present work has not been completed.

These are examples of work overload, where the employee cannot cope with the excessive demands of the work. This can result in job dissatisfaction, job tension, and other stress-related symptoms (Cooper & Payne, 1979; and McDonald & Doyle, 1981).

To alleviate both these problems, the work of clerks can be designed in such a manner that it allows for:
(i) Task rotation, where different people perform certain tasks at different times, thereby allowing each other to be relieved from the monotony of one task;
(ii) Creation of teams or groups of employees that consult with one another and with management on the methods of working, as well as in participative decision–making;
(iii) Allowing workers to develop their own pace of work, and
(iv) Providing workers with suitable incentives (Bennet, 1994).
Shift workers usually experience stress at work as the requirement of their job is to

work at times when others do not, such as late nights and early mornings. This results in a disruption of their biological rhythms such as sleep patterns and body temperature.

It also results in reductions of quantity and quality of sleep which may bring about constant fatigue, irritability, and disorientation. The family life of shift workers is also disrupted, and this may cause anxiety about childcare as well as social isolation. Further, employees who complain of lack of sleep have also had significantly more work accidents and sick days than those who do not (Bennet, 1994, Sutherland & Cooper, 2000).

To alleviate such a problem, shift workers should also work on a job rotation schedule so that some work days are during normal business hours whilst others may be during night shift hours. Timetables or rosters that allow for rapidly rotating shift sessions with fewer night shifts in between may be a better strategy (Sutherland & Cooper, 2000, Levi, 1981).

5.1.5. General Work Problems

The last category of stress inducing issues / problems at work pertains to :

- Lack of career path;
- Temporary positions;
- Standby two weeks per month, and
- Incentive schemes.

The lack of a career path can be stressful for an employee as they may feel that they are stagnating in their present situation. This may result in frustration, anger and possibly a sense of apathy about their job. However, it is important for individuals to play a part in their own career planning along with the organisation's career planning. Individuals can identify their strengths and weaknesses; select departments, divisions or positions that they feel would provide the best experience, and then establish their

career goals and priorities. They may even observe closely the work and the behaviour of their superiors so as to aspire to their level. Next, individuals can identify their career alternatives, and choose an option that would best expose their strengths and minimize their weaknesses. Finally, they need to monitor their achievements and provide reasons for any shortcomings so as to correct them (Bennet, 1994).

In addition to the above, employees can upgrade their skills and improve their own development by attending courses and studying for further degrees or diplomas. The organisation can also help by providing for developmental tasks such as offering to finance courses, diplomas or degrees.

The organisation can assist by providing employees with a sequence of work experiences that will equip them for higher levels of responsibility and greater challenges. Career counselling should be provided to guide employees toward the best career options available. Appropriate training should also be provided, along with a restructuring of work and job design to enhance opportunities for employees for personal enhancement (Bennet, 1994).

Such career planning is advantageous for the employee and the organisation as it encourages employees to upgrade the skills that are crucial to achieve work goals. It also allows for employees to perceive the organisation as caring for their welfare, thus making them feel positive and satisfied with their jobs. Organisations also tend to be better co - ordinated when employees' careers are planned. Employees have tangible long - term goals to work for, and their competence steadily increases. They can also assess their progress against a predicted career path. Thus, career planning is important for organisations like DME that implement equal opportunity programmes (Bennet, 1994).

Temporary jobs are stressful situations as employees are anxious about the

temporariness of their jobs. The lack of a permanent income results in the workers struggling to provide for their families. Their temporary status may also impact on their self-esteem and their motivation to work. Such job insecurity can cause great anxiety and stress, which may also result in reduced concentration at work.

Being on standby two weeks per month is also a stressful predicament. The employee does not have a routine in which he or she can feel comfortable. Instead, they are on edge as to whether they will be called into work for that day or not. This is also a situation that implies job insecurity, and thus, anxiety. These employees are anxious about being called at any moment to fix electrical problems. A solution here would be to use a method of job rotation, where different people are on standby on different days or weeks, thus alleviating the strain on one person to be on standby for two weeks in the month.

With the South African economy becoming more flexible, unemployment levels and retrenchments are on the increase. The move toward casual labour is being taken as organisations struggle to compete in a global market. Most workers are feeling the impending loss of their jobs (Basckin, 1996). There is therefore, not much that can be done about the anxiety and stress of such employees. A possibility is that they could go for counselling to deal with the anxiety and stress, as well as for further skills training, so that they are multiskilled and hence, not obsolete in the job market.

Incentive payment schemes are perceived by employees to be stressful as they are paid for the speed with which they complete a work task. This may result in a lack of adherence to safety rules in the workplace as workers are working faster to be paid more. A consequence of this could be anxiety and fatigue, resulting in stress (McDonald and Doyle, 1981 and Bennet, 1994).

However, according to Bennet (1994), there are arguments for and against money

being a primary motivator for hard work.

The arguments *for* money being a primary motivator are:

- Higher wages result in access to physical goods, services and lifestyles, which are all valued by employees.
- Higher wages also imply occupational competence, and therefore, success in society.
- Money can buy luxury items, which may help to boost self-esteem in people.

The arguments *against* money being a primary motivator are:

- Workers may fear that once the high performance targets that are linked to larger pay have been met, it may become a norm. Some employees may prefer a less intensive pace of work.
- The definition of good pay is subjective. Thus, some employees may feel that the pay is too low for the amount of work that they do.
- Employees may want to assert their independence from management and therefore form socially coherent groups which influence their behaviour more than the prospect of higher wages. Therefore, they may not want to aspire toward earning a maximum amount for the day, but rather, they aspire to being healthy and socially happy (Bennet, 1994).

Whatever the argument, money is a convenient way of measuring the worth of a job and of showing workers the standards expected of them. Pay increases may improve worker morale, performance and commitment, but this is only in the short-term. In the long-term, larger and larger amounts of money may be needed to increase employee satisfaction, and this may not be practical for an organisation (Bennet, 1994). Therefore, other alternatives need to be considered, such as incentives of acquiring status, awards for good work, the respect of fellow-workers, and promotion opportunities.

5.2.1. The Physical Effects of Stress

Employees spoke of exhaustion, physical discomfort, lack of sleep, nausea, weight gain and high blood pressure as physical effects of the stress that they experience.

When asked how they would manage such physical stress, they suggested:

- More staff to reduce the workload as well as to distribute workload evenly, thereby allowing more time to complete work;
- Having management improve their approach toward staff;
- Time Management;
- Working as a team, and
- Getting new and quality materials to work with.

The above are all viable solutions that need to be taken into account by DME and its employees themselves. In addition, however, the stress management programme taught many relaxation techniques that could also be applied on a day-to-day basis to reduce physical stress.

The stress management programme suggested:

- Physical exercise such as jogging, running, cycling, swimming, aerobics and walking;
- Specific stress relaxation exercises such as stretching exercises, meditation exercises, controlled breathing exercises and imaging exercises;
- Eating a healthy, balanced diet with all the correct vitamins;
- Slowing down physically, ie: doing one task at a time;
- Getting a massage, and
- Doing a fun thing such as gardening, painting, or going away for the weekend.

The above are practical solutions to alleviate daily stress.

5.2.2. The Emotional Effects of Stress

The following effects of stress have the ability to hinder an employee's ability to function effectively in the workplace:

- As a result of stress experienced by employees, many feel angry, moody, upset, fearful, frustrated, resentful, despondent, unhappy and irritable.
- Several employees claim that they react in the above ways when they get no support from management and when supervisors are inconsiderate regarding large workloads.
- Some employees say they do not feel understood by others and therefore feel alone and inadequate. Others get upset when consumers vent their frustrations on them when power failures occur.
- Many employees say that they take their emotions out on their families when they get home. This in turn causes more stress to themselves and to others.

Some employees suggested that management and supervisors be more aware and considerate of their feelings and be willing to resolve any workplace conflict. This falls under the heading of openness and participation in decision-making that was covered earlier in the chapter.

Another suggestion was ignoring people who cause stress, but this may not be a very effective way of managing stress. A better option is to speak to people, communicate with others, or to ask for advice about a stressful situation. This would alleviate the burden of dealing with the stress alone. Such a suggestion also falls under the heading of openness in the workplace.

Other employees spoke of facing the problem head-on rather than avoiding it, and yet more spoke of establishing a sense of pride in themselves and in others so as to feel more confident. They did not say how this is to be done, but it does pertain directly to building a shared vision (mentioned previously in this chapter) and working towards it

in a unified manner.

The stress management programme covered to a large extent the ways in which emotional stress can be managed. It suggested:

- Finding time to be alone with oneself every day;
- Being assertive and learning how to make requests from others, and to say 'no' to things one cannot do;
- Building a positive sense of self-awareness, ie: not associating oneself with one's mistakes. As a result, one does not carry one's failures forward;
- Building a positive sense of self-esteem, because how you feel about your potential makes a difference in your actions. Therefore, one should not compare oneself to those higher or lower than one;
- Changing the comfort of staying the same and going ahead with challenges;
- Accepting oneself as one is at present;
- Building up positive self-control, where one exerts a degree of control over the outcomes of one's life, thus taking responsibility for oneself and exercising one's power of choice;
- Building a positive self-image, by developing a plan as to how one is going to achieve one's goal, and
- Building a sense of positive self-expectancy, because what the mind harbours, the body manifests.

From the above, one can observe that stress management is all about being positive about the situations that one is in, yet being realistic at the same time and planning one's actions with fixed purpose in mind. This helps one to achieve what one desires, hence reducing stress. This concept of rationalisation has been discussed in the literature chapter. Maultsby and Hendricks (1974) and Lazarus (in Stress and Coping, 1977) both propose taking control of a situation and managing emotional reactions in a logical, practical way. Control of one's emotions helps in improving physical and

173

emotional well-being.

The stress management programme also advocated methods of effective coping. Effective coping depends upon how well one can identify what one's bad coping habits are, and then change them to effective and positive ones. Many people have the resources to cope with their problems but they do not know how to use them. This can be done once a person has built up a sense of self-awareness. However, people must understand that they are human and they make mistakes. These mistakes should not be carried as a burden for the rest of their lives. Attitude is therefore crucial in helping people cope with stress. People may experience a completely different view of life once they start approaching situations differently. To do this, it is crucial to establish what is important to oneself, and to have fun and enjoy life. It is important for everyone that they are happy and fulfilled in life.

It was also mentioned in the stress management programme that people should try do one task at a time when attempting to cope. Trying to do too many tasks simultaneously may lead to anxiety and stress. In addition to this, people were encouraged to express their feelings so as to communicate better with others. These ideas have been gleaned from the literature by Wilson (1995 and 1997), Maultsby & Hendricks (1974), and Lewis (1997), and have been re-emphasised in the stress management programme.

5.2.3. The Cognitive Effects of Stress

Many employees cited mental tiredness, exhaustion, anxiety over risks in safety, and lack of mental stimulation as stressful.

The suggestions made as to how to manage such stress are:
- Having the correct tools and information to work more productively and safely;
- Organising time, and reorganising work (eg: job rotation), resulting in changes and reduction of monotonous routine;

- Weighing the pro's and cons before making a decision;
- Educating staff about implementing safety awareness measures, and
- Setting fun goals along with career goals.

All of the above suggestions are viable. They include aspects of self-control which is important for keeping things in perspective as well as for reducing stress. This shows that some of the employees do have a good idea of how to cope in stressful situations. It remains to be seen whether these methods are implemented or not. Furthermore, cognitive exhaustion can be alleviated somewhat by meditation and breathing exercises, as well as stretching exercises. The relief one may feel physically from such exercises extends to cognitive relief.

5.3. Quantitative Data

The quantitative data was analysed by comparing the results of the pretest with the results of the posttest. The comparison was done statistically by means of a t-test.

The graphs presented in the Results chapter (Chapter Four) show the groundwork upon which the t-test results are based. The graphs illustrate the rise, drop or stagnation of different variables that are linked to stress levels. The researcher chose to concentrate on the final results of the t-test to draw conclusions about stress levels amongst employees.

Since there are sixty different variables that have been used in the research survey, the researcher chose certain relevant variables that relate to specific perceived stressors of employees, for the quantitative data analysis and discussion.

These specific variables will be linked to the five different categories of stressors, ie:

i.   Management problems
ii.   Safety at work;
iii.   Staff problems and negative attitudes of staff;
iv.   Stressful work tasks; and
v.   General career stress;

as well as the perceived effects of stress on employees by employees, ie:

i.   Physical stress;
ii.   Emotional stress, and
iii.   Cognitive stress.

As mentioned in Chapter Two, stress has physical, psychological and emotional components. Hence, the researcher attempted to choose variables that best reflected all the manifestations of the above.

Twelve different variables were then chosen:
i.   Nervousness;
ii.   Feeling blue;
iii.   Feeling like crying;
iv.   Feeling overcome by difficulties;
v.   Happiness;
vi.   Losing confidence (in oneself);
vii.   Feeling pleasant;
viii.   Feeling under strain;
ix.   Feeling tense;
x.   Tiring quickly;
xi.   Unhappiness, and
xii.   Worry.

5.3.1. Nervousness

The variable representing nervousness was chosen for analysis due to its links with physical and emotional effects of stress.

In the physical sense, stress can be seen as a physiological response of an individual to environmental changes. The consequences of physical stress can affect a person's cognitive and social health. It is a perceived quality that manifests itself within an individual when they feel that they cannot cope with and adapt to the changes around them (Genazzani, Nappi, Petraglia & Martignoni, 1991).

Emotionally, the impact of the environmental stress is a threat to the well-being of the individual. This may trigger distress, and as a result, emotional stress.

An employee could feel nervous about any of the aforementioned stressors: management problems; safety risks at work; stressful work tasks; and general career stress.

Problems with management may affect the employees with regard to their emotional well-being. This is because they perceive hostility and distrust from management and in turn, feel inadequate. This results in feelings of anxiety and nervousness when dealing with management.

Stressful work tasks could be a further factor causing nervousness amongst employees. When it comes to safety risks at work, it is inevitable that employees dealing with as dangerous and unpredictable an element as electricity, would feel nervous. There is the constant danger of being electrocuted, as well as the added danger of fixing electrical problems in dangerous and crime-infested areas.

For general career stress, many employees mentioned the lack of career development,

or career pathing. This could cause nervousness as employees are unsure about their future, and about their financial stability.

For the above reasons, a t-test was run on this particular variable. The t-test results showed that there is no significant difference in pre- and posttest scores for this variable. The t-test score is 0.177. This is greater than 0.05 and is statistically regarded as insignificant. A slight decrease (0.2564) of nervousness levels can be ascertained when analysing the mean scores of both tests. However, it is not a significant enough difference to draw any confirmed conclusions.

5.3.2. Feeling Blue

The variable "I feel blue" relates to the emotional effects of stress. As stated by three employees in the pretest, when they get no support from management, and when superiors are inconsiderate and place great pressure upon them, they feel stressed and therefore, feel blue.

In addition, negative attitudes of colleagues and staff may, over time cause feelings of depression and may be described as "feeling blue".

General career stress and lack of career development / career pathing may also bring about feelings of disappointment and hopelessness. This can also be described as "feeling blue".

The t-test for this particular variable reflects no significant difference in pre- and posttest scores. The t-test score is 0.343. A minimal decrease of 0.1471 can be seen when comparing the mean scores of both tests. However, it is not significant enough to reflect a drop in levels of employees feeling blue.

5.3.3. Feeling like Crying

This particular variable also relates to the emotional effects of stress. Eleven employees cite feelings of despondence, upset and unhappiness. This could be linked to stressors such as :

- miscommunication between management and staff;
- risks taken dealing with potentially dangerous electricity, and when going into dangerous work areas;
- staff problems and negative attitudes of staff;
- stressful work tasks, and
- general career stress.

The t-test score of 0.27 of this variable shows a significant reduction in the number of employees who feel like crying. This implies a decrease in feelings of despondence, upset and unhappiness. In turn, there is an implication of a reduction in stress levels.

In addition, a comparative analysis of the bar graphs shows that the posttest does not feature the "almost always" category for employees who feel like crying. This means that none of the employees who chose this category in the pretest (one clerk and oneof electrician), did so in the posttest. It can then be concluded that there is a significant drop in the levels of stress of employees in this category, especially with regard to clerks and electricians.

5.3.4. Feeling Overcome by Difficulties

This particular variable relates to emotional and cognitive effects of stress. Many employees may feel overcome by the problems they encounter with management as they are overruled by the authoritative manner of their superiors. Other difficulties they may come across are: being overcome by the obstacles in dealing with the negativity of staff; the lack of career development; the stressful work tasks, the dangers of work, and general career stress.

179

However, the t-test shows a significant difference in pre- and posttest score with regard to this variable. There is a marked reduction of 0.001 of those feeling overcome by difficulties. This would imply that stress levels are reducing, and that there is an improvement in staff feeling that they are able to cope with the problems that they face. Coping resources that were suggested in the stress management programme could have contributed to this.

5.3.5. Happiness

The variable "I feel happy" can be linked to the emotional effects of stress as well. The measure of feelings of happiness can be used to guage the measure of stress as well. Hence, the higher the levels of happiness, the lower the levels of stress, and vice versa.

The t-test score of 0.011 shows a significant difference in the pre – and posttest scores. There is an overall increase in the number of employees who feel happy. This signifies an overall decrease in stress levels.

5.3.6. Losing Confidence

The variable "I feel I am losing confidence in myself" can be associated with the emotional effects of stress. In addition to this, it can be linked to problems with the attitudes of staff or general problems communicating with staff and colleagues.

Twelve employees speak of their authority being taken away; of having difficulties with their boss, and of facing too many demands or dealing with unreasonable demands made by their boss. In addition, the feelings of losing confidence can be linked to work tasks that are perceived as stressful, such as trainees not being given enough work, supervisors being given extra work when daily work is not finished.

The t-test of both pre- and posttest scores shows that there is no significant difference

in scores of this particular variable. This implies that there is no increase or decrease in such feelings of losing confidence. Hence, it implies that stress levels pertaining to this category have remained the same. There is a slight drop of 1.43 in stress levels, but it is not significant enough to draw any conclusions.

5.3.7. Feeling Pleasant

The "I feel pleasant" variable can also be linked to the stressor of staff problems and negative attitudes of staff. However, it can further be used to understand work tasks that are perceived as stressful, general job stress, and the physical, emotional and cognitive effects of stress. It is an all-encompassing variable that can be used to analyse a number of different stressors.

The t-test score of 0.014 shows a significant increase in pleasantness from the pretest to the posttest. The pretest reflects two clerks claiming to feel very pleasant. The posttest however, reflects six clerks who say the same. This indicates a drop in stress levels amongst clerks especially.

5.3.8. Feeling Under Strain

The variable "I feel under strain" can be related to physical effects of stress cited by employees, such as exhaustion, physical discomfort, headaches, inability to relax, disrupted sleep / difficulty falling asleep, and high blood pressure. It can also be linked to cognitive effects of stress such as mental exhaustion. In addition, stressful work tasks may also place strain upon employees, eg: routine clerical administration work, or shift work. Furthermore, safety issues may also play a role in placing strain upon employees, eg: the risk of being injured taken when dealing with electrical problems, and the risk to one's life when going into dangerous areas.

The t-test score 0f 0.000 shows a significant decline in stress levels, and hence in strain levels as well.

181

5.3.9. Feeling Tense

The variable "I feel tense" can be linked to stressors such as management problems, safety at work, staff problems, stressful work tasks, general job / career stress. It can also be used to understand the physical, cognitive and emotional effects of stress. This is another all-encompassing variable that can be used to analyse and explain most of the perceived stressors.

The t-test score of 0.442 shows that there is no significant overall difference in the "tense" scores from the pretest to the posttest.

5.3.10. Tiring Quickly

The variable "I tire quickly" can be directly related to physical effects of stress as well as cognitive effects. However, the t-test score of 0.183 shows no significant difference in the scores between the pre- and posttest. This implies that there is no increase or decrease in stress levels based on tiredness or exhaustion.

5.3.11. Unhappiness

The variable "I am unhappy" can be linked to emotional issues and effects of stress, safety issues at work, staff problems, stressful work tasks, management problems and general job / career stress.

The t-test score of 0.011 shows a significant difference between the pre – and posttest scores, with a mean decline of 0.4615 in the levels of unhappiness, and therefore, a decline in stress levels.

5.3.12. Worry

The variable "I worry too much" can be linked to issues of safety at work, stressful work tasks, management problems and emotional effects of stress.

The t-test score of 0.334 reflects no significant difference between the pre- and posttest scores of this variable, implying no significant decrease or increase in stress levels.

5.4. Summary

From the analysis above, it is clear that half the variables show a significant decrease in stress levels of employees at Durban Metro Electricity, whilst the other half show no significant change or drop in stress levels.

Those variables that showed significant drops in levels of stress are:

(i)   Feeling like crying: This reflects a significant decrease in despondence, unhappiness and feeling upset. Employees may now be feeling less tearful and more in control of their emotions.

(ii)   Feeling overcome by difficulties: This reflects a decline in stress levels caused by overwhelming amounts of work or problems. It also implies better coping resources used by employees. The coping skills practised in the Stress Management Programme may have helped to reduce stress that is caused by feeling out of control over work situations.

(iii)   Feeling happy: The number of employees who feel happy increased significantly. This is an all-encompassing variable, and it implies that employees are feeling less stressed in general.

(iv)   Feeling pleasant: This all-encompassing variable represents an overall feeling of well-being amongst employees, and the evident increase suggests a reduction in stress levels.

(v)   Feeling under strain: The significant decline in feeling under strain implies a
       decline in mental exhaustion and headaches. It may even imply that safety
       issues that usually cause stress are now being dealt with.

(vi)   Feeling unhappy: The decline in unhappiness levels reflects an overall
       improvement in coping resources as well as reduction in stressors. Employees
       may have experienced improved relationships with their superiors
       (management).

Those variables that showed no significant decline in stress levels are:

(i)   Feeling nervous: The stagnation of levels of nervousness implies that
       employees still feel anxious and nervous. This implies that the Stress
       Management Programme did not effectively address the emotional stressors
       affecting employees.

       This problem requires a secondary level of stress management intervention,
       where employees can be taught to cope with their stress and to develop
       adaptive coping strategies through education and training. Techniques such as
       meditation, breathing exercises, building social support networks and forming
       personal action plans can be emphasised (Sutherland & Cooper, 2000).

       However, if the nervousness stems from environmental or organisational factors,
       then the structure of the organisation needs to be analysed, to find possible
       gaps in communication between co-workers and between managers and
       employees.

(ii)   Feeling blue: The insignificant decrease of levels of feeling blue shows that
       employees are still stressed, depressed, disappointed and experience feelings

of hopelessness. Hence, although other variables may reflect an increase in coping resources and feelings of control, the effect has not been complete.

This problem would require a tertiary level of intervention where counselling services, EAP's and social support is provided for employees. However, if employees are feeling blue and are experiencing feelings of hopelessness due to organisational factors and not their own personal problems, then a primary level intervention is warranted. This could include changes in the macro and micro environment.

As mentioned in chapter two, these changes include :
- Establishing an open an supportive culture;
- Job redesign;
- Educating employees about safety measures;
- Having regular performance appraisals;
- Identification of areas of work underload;
- Role clarification; and
- Increasing worker participation.

(Quick, Quick & Nelson, 2000, International Labour Organisation, 2001, and Sutherland and Cooper, 2000).

(iii) Losing confidence: Levels of self-esteem seem to have stayed low. This could be due to the authority of workers being taken away by management, or because workers feel they cannot cope with their workloads. This factor needs to be addressed via open discussions with management and employees together.

(iv) Feeling tense: The t-test score reflects an insignificant change here, but further analysis of the graphs shows an increase in tenseness.

Again, a variety of stress management interventions can be administered here, but the organisation first needs to determine the reason behind the tenseness. Macro and micro environmental changes can be considered to deal with such problem. In fact, a two-pronged approach to this problem (eg: role clarification and counselling) may alleviate symptoms of tenseness.

(v)   Feeling tired: The physical effects of stress have not changed according to this t-test score. Employees still experience tiredness, exhaustion and strain. It is possible that exercises taught at the Stress Management Programme have not been practised and applied in stressful situations.

However, the idea of developing a Stress Management and Relaxation Centre for the worksite itself may help in reducing this problem. This centre would be similar to a fitness centre, where employees are provided with an area, equipment and qualified staff to encourage stress awareness and to aid in teaching techniques for stress reduction (Randolfi, 1986).

(iv)   Worrying too much: The insignificant change in stress levels of worry reflect that coping resources have not improved in this area. Counselling may help to improve coping skills and to help the individual exert control over their anxieties.

Further, social support networks and formulating an action plan for the day both help in alleviating worry levels.

Chapter Six

Recommendations and Conclusions

6.0. Introduction

It has been established in the literature review of Chapter Two that stress can be seen as a result of a transaction that has been influenced by both the individual and the environment. Stress reflects the relationship between the individual, and the environment that is appraised by the individual as taxing or exceeding his or her resources and endangering his or her well-being. Therefore, stress is a dynamic relationship that is constantly changing between the individual and the environment as they act on each other. Coping refers to the behavioural and cognitive efforts to master, reduce or tolerate the demands created by stressful transactions (Meichenbaum, 1985, Sutherland and Cooper, 2000, and Lazarus in Stress and Coping, 1977).

Taking the above into account, it can be said that it is important to educate and change the attitudes and behaviour of the individual with regard to stress as they need to know how to cope with the high pressure environment of the organisation. However, it is also important that the organisation be changed in its attitude and behaviour with regard to the stress of its employees. Therefore, a combination of both individual and organisational interventions are needed. This chapter will recommend such interventions.

6.1. Implications for the Reduction of Stress

Many stress reduction methods aim to reduce stress by eliminating external environmental stress factors, such as reducing noise levels in factories or increasing

light levels at workstations. Such methods are characteristic of successful ergonomic principles, and are usually applied to groups of workers (Corlett & Richardson, 1981).

Studies in Scandinavia and the USA have shown that such job redesign measures increase the psychological well-being of the worker population. However, it is taken for granted that all workers in the group will benefit from such an endeavour. The perceived demands, capabilities and needs of workers in a group may be similar, but may not be identical. Thus, job redesign may benefit some of the workers in the group, and have very little or no benefit for others (Corlett & Richardson, 1981).

To overcome the above problem, it is suggested that the individual worker become responsible for achieving a balance between work demands and his or her own skills and needs. Attaining such a balance can help deal with stress in a healthy manner. This balance can be achieved by modifying an individual's cognitive appraisal of their work demands through stress management programmes and counselling.

6.1.1. The Stress Management Programme (SMP)

This is a popular way to address the problem of stress within organisations. According to Everly (1990) there are five components of an effective SMP:

(i)   Explaining what stress is;

(ii)   Explaining the personal health and performance implications for eustress (positive stress) and distress (negative stress);

(iii)   Providing a method for identifying personal symptoms of excessive stress; and

(iv)   Providing an explanation of and practice in various stress-management techniques.

The SMP at Durban Metro Electricity explained the meaning of stress well. However,

it did not focus enough on the positive side of stress (eustress) and how that can be used to an individual's advantage. It did touch on identifying personal symptoms and causes of stress to some extent.

The SMP concentrated mostly on :
- Helping the individual develop strategies by which to avoid, minimise or modify exposure to stressors and to reduce the tendency to experience the stress response;
- Helping the individual develop skills in relaxation, thereby inhibiting the stress response; and
- Helping the individual develop techniques for healthy expression of the stress response.

The SMP did not facilitate organisational development and redesign to reduce or eliminate occupational stressors. This is because it focused only on the stress and coping strategies of individuals. Organisational development and redesign is only indirectly under the control of the individual. To bring about a change in the work environment itself requires a huge task that ranges from small changes in job descriptions, or ergonomic changes in office environments, to larger changes that might require changes in the organisational structure. It is accepted that some corporate climates and some jobs are inherently stressful and are unable to change. Hence, stress management interventions can only show emphasis on individuals rather that on organisations or jobs (Everly, 1990).

The outcome of the SMP at Durban Metro Electricity resulted in employees experiencing a drop in certain variables of stress. They experienced reduced levels of feeling like crying; feeling overcome by difficulties; feeling under strain and feeling unhappy. In addition, they experienced increased levels of feeling pleasant and feeling happy.

However the remaining half of the variables that indicate stress levels did not decrease. The t-test results showed that employees still feel nervous, blue, tense and tired. In addition, there has been no change or improvement in their losing confidence in themselves and in worrying too much. Hence, these emotional factors have to be dealt with differently.

6.1.2. A Multidimensional Model for Stress Management.

Due to the above problem, it is important to use a Multidimensional Model for Stress Management so as to allow the individual a variety of techniques and resources to draw upon when dealing with stress. Everly (1990) poses such a model (See chapter two).

Such a multidimentional model is important as it encapsulates strategies for individuals to develop particular skills to deal with job stress. SMPs usually focus on training people to control the symptoms of stress, such as teaching them meditation and muscle relaxation (Newton, 1995). This may help to reduce the symptoms of the emotional stress reactions experienced by employees to some extent. However, it may not be enough to change just the mindsets of employees and to help them improve their coping strategies. If the organisation cannot be developed to become more efficient in its day-to-day running, employees stress levels may never decline.

6.1.3. Stress Inoculation Training

Stress Inoculation Training is another holistic approach. Proposed by Meichenbaum (1985), it focuses on the development of skills to enable individuals to deal with and to diffuse stressful situations at work. It provides individuals with a conceptual framework by which to understand stress. It also facilitates the development of cognitive and behavioural skills, which are successful in dealing with stress (see Chapter Two).

Stress inoculation training consists of relaxation training, components of problem solving, cognitive strategies and self-instructional training.

It is important for workers to develop a variety of intrapersonal and interpersonal coping skills. This helps in achieving the goal of Stress Inoculation Training (SIT) which is to help individuals adapt and to respond to stress positively. This facilitates better mental health and psychological well-being.

It is therefore recommended that DME construct and implement a stress inoculation programme to aid employees to effectively adapt to and cope with the stressors they face.

In the workplace, technological, organisational and job changes all provide situations where well-being may be affected. As a result, individuals may move further away from or nearer to healthy adaptive patterns of functioning. If one can deal with problems and develop new coping strategies and abilities in the process, then one will have greater flexibility in the future with regard to improved ability to deal with future stress. Organisations can play a role in ensuring the individual's well-being by providing a counselling service to strengthen their resolve to deal with problems. This will help them to face the future emotionally better equipped (Tinning & Spry, 1981).

6.1.4. Problem Focused Stress Counselling and Stress Management Training

Stephen Palmer (2000) proposes a problem focused approach to stress counselling and stress management training.

His approach integrates a seven stage problem solving method:

Stage 1

Here, counsellors need to identify and clarify the main issue.

This is essential as the worker may not be clear on what the real stressful issue is. They may be genuinely confused about what is wrong, or just have a general sense of unease, anxiety or depression. It is also possible that the problem is too complex for them to know where to begin, or they may be hesitant in disclosing the problem.

The counsellor therefore needs to use the additional skills of 'externalising and visualising' and 'simplifying' over and above the skills of paraphrasing, summarising, reflecting, and being concrete (Palmer,2000: 2).

Externalising and visualising involves displaying the information the worker provides in a visual form, such as on flip-charts, overhead projectors or white-boards. This helps to free the mind from having to retain and understand data, so that both counsellor and client (worker) can concentrate on interpreting and evaluating it (Palmer,2000).

Simplifying refers to the skill of breaking down a problem into smaller parts so that these are more manageable. Hence, vague or complex issues become clearer. If there are various different problems, then a problem list can be drawn up and problems can be ranked in order of importance. According to Palmer (2000), clients often find possible solutions to their problems once they have been clarified and discussed. This could help to alleviate the feelings of anxiety and 'feeling blue' that employees experience.

Stage 2

This stage requires both client and counsellor to set and select realistic goals that are stated in behavioural and emotional terms. Hence, the counsellor needs to check and challenge unrealistic and unattainable goals (Palmer,2000).

Key issues that need to be considered when setting goals are:

- Resources: Goals should be within the personal and environmental resources of the client, eg: if the client has a work overload and insufficient time to complete the work, then time management skills may not help (Palmer,2000).

192

- Specificity: Goals should be concrete and specific. For example, the goal "To become less stressed at work is too vague". The clients needs to choose a specific stressful situation, such as a presentation to senior staff members, and work on ways in which to reduce the stress. This could be done by adequately preparing for the presentation (Palmer,2000).

- Realistic: Goals need to be realistic as the process of stress management is a gradual one. Clients should not rush into getting successful results as they may become disillusioned. Therefore, they should not aim to excel immediately at a certain task, but plan a gradual advancement towards excellence (Palmer,2000).

- Substantial: Goals should not be aimed so low that the client gets demotivated due to slow progress (Palmer,2000).

- Verifiable: Goals have to be measurable. They should be broken down into smaller steps and stated in behavioural terms. For example, when preparing for a presentation, the client should be guided into practising their voice projection, timekeeping skills, and their designing handout skills. They could also practice their physical exercises (relaxation exercises) to keep them calm during the presentation (Palmer,2000).

- Recognised as their own: For the client to stay committed to his or her goals, the goals have to be seen as their own. The counsellor must ensure that the goals are what the client wants (Palmer,2000).

- 'Why' questions: Asking a client why they want to achieve a certain goal may reveal an underlying problem that may need to be resolved. For example, the client may want to do a presentation so that they can avoid further confrontations with their seniors regarding their work. It would be better for the counsellor to then explore with the client, ways in which to manage his or her relationship with seniors (Palmer,2000).

Stage 3:

At this stage the counsellor needs to encourage the client to think of possible options and alternatives to reach his or her goals. A great deal of creativity is required and both parties should keep an open mind to the solutions suggested. The list of available alternatives decided, can be increased by combining, modifying and elaborating upon existing ones. In addition, the counsellor can ask the client to imagine what a friend would do in a similar situation (Palmer,2000).

Stage 4:

Here, the pros and cons of the different solutions are considered and the possible consequences are assessed. For example, if a solution requires that the client behave in a certain way, the client needs to consider how others would react and what the consequences of their reactions would be (Palmer,2000).

Visualisation techniques would be useful at this stage to assess what may happen in the future (Palmer,2000).

Stage 5:

At this stage the client has to decide for themselves which option is the most feasible with the least negative consequences for the greatest gain. The solution plan should aim to resolve the problem, maximize personal and emotional well-being and minimize time and effort (Palmer,2000).

Stage 6:

The counsellor should help the client break down the chosen solution into steps that are manageable for him or her. The client should be encouraged to:
describe his or her strategy in a step-by-step manner ;
focus on achievements rather than failure;
focus on a challenging goal that will give a sense of achievement; and

- confirm that he or she has the physical and emotional resources to achieve the goal.

During the counselling session, practice sessions and rehearsals of the agreed stress management behaviour can be held. Coping imagery can also be used to deal with the predicted stressful situation. In addition, contingency plans and relaxation exercises can be devised and practised to help reduce the client's anxiety. Furthermore, client and counsellor should discuss how progress will be monitored.

Stage 7:

This is the evaluation stage, where realistic assessment of the progress would be shared. The client needs to consider whether the goals stated at the outset have been achieved, and whether the stressful problem has been resolved or managed.

If the answer to the above question is negative then the stages 1 to 6 need to be repeated, bearing in mind any mistakes that were made previously. If the problem has been resolved, another problem can be tackled following the same steps.

It is recommended that such a counselling process be undertaken by DME to help employees cope with the stresses they face, and to help alleviate their problems. Such an intervention could be implemented in the EAP or by Human Resources Services.

6.2.   Support systems and resources to help reduce stress

Bearing the above in mind, it is still maintained that it is not enough to simply train and equip workers with efficient coping skills. Stress management within the organisation should include support systems and resources to help reduce stress.

This could include a system where managers and workers come together to consider organisational changes and job redesign (Meichenbaum, 1985). This encapsulates the concept of stress inoculation training.

According to Smith (1998), organisations need to recognise and provide for the vulnerability and idiosyncrasies of their people. They also need to take some responsibility for correcting the negative effects of job alienation and management hierarchies. It is not sufficient to train people to manage their own stress. Evidence of this is shown clearly in the t-test results of the research. There is a 50% reduction of stress levels amongst employees at Durban Metro Electricity. However 50% of stress levels remain the same. Hence, not all employees are affected by the SMP or benefit from it.

Organisations need to provide some organisation-specific provision (through honest discussions, for example) for people to process (collectively and alone) the emotions their work necessarily brings up (Smith, 1998). Hence, we see the need for discussion forums between management and employees to resolve disagreements and to reach compromise.

Motorola has a comprehensive in-house EAP whose function is not only to deal with the emotional damage done to the employee by the organisation, but the EAP also provides for group discussions on what it means to be safe and respected at work. There is also an IDE (Individual Dignity Entitlement) which involves systematically asking employees on a three-monthly basis what their needs are (Smith, 1998).

In line with this, Durban Metro Electricity can also implement a system where management and staff can come together to discuss their feelings about work processes and work relationships. Hostility between management and staff can be reduced in this way. In addition, staff can express their views of inadequate

management, autocratic management, and work overload, and discuss possible solutions to these stress-inducing issues together with management.

When it comes to problems with attitudes of staff and problems with staff in general, communication skills will play a crucial role, along with open discussions with management.

The same skills are being implemented at London Transport. This organisation prefers to conduct stress audits and evaluations and analyse different stressors. They found that one of the stressors was the threat of violent assault on station staff. London Transport then implemented initiatives to train their staff in conflict handling, better communication, and security (Smith, 1998).

Electricians at Durban Metro Electricity face the same stressor of the threat of violent assault when they go out into rural areas and townships to do electrical work. It is suggested that they undergo training in conflict handling and security. This has been backed by employees at the stress management programme who suggested the educating of staff about implementing safety awareness measures in dangerous areas.

If Durban Metro Electricity finds that a stress audit is too expensive, they can follow in the tracks of the Aberdeen City Council in the United Kingdom. This organisation set up a working party that included trade union representatives. A consultant came in to facilitate a one-day workshop on strategy and policy development. Senior managers realised that it was practical to be responsible for the well-being of employees as emotionally and mentally fit employees produce efficient and better quality work. The strategy that emerged from the workshop included scheduled improvements in communication, communication skills, measures dealing with bullying, harassment, equal opportunities, job sharing, absence management,

teleworking, flexitime, codes of conduct, health and lifestyle, and re-entry to work. The strategy was based on expectancies from both management and staff in terms of dignity and other social needs, as well as work requirements. It was emphasised that individuals have a role to play in maintaining their own health along with the role played by the organisation (Smith, 1998).

6.3. Organisational Changes Required for Stress Reduction

6.3.1. Popularity of the SMP

It is argued that stress management programmes are popular with organisations as they neutralize the manifestations of stress that predispose workers to illness. They are appealing because the stress management techniques are easy to teach and depend on the initiative of the individual. However, they do not affect the sources of stress (Moss, 1981).

In addition, the establishment of EAP's is standard procedure. However, they do not provide for the active participation of managers and employees at all levels in a critical review of organisational structure, practices and dynamics with a view toward finding creative solutions to reduce stress. It is suggested that active involvement of management and employees in planning, problem solving and policy making is potentially the most valuable stress management technique (Moss, 1981).

This view has also been asserted by the employees attending the SMP at Durban Metro Electricity. When asked in the survey what they suggest a good stress reduction method would be, six employees suggested that supervisors and managers should be more aware of and more considerate in their attitude and be willing to resolve conflicts. Three employees suggested that communicating with others to understand each other's point of view will also help to iron out problems in

the workplace.

6.3.2. Management Awareness

It is important for managers to be aware of the problems that employees face in the working day as they have the authority to correct the situation. There are a variety of organisational interventions they can implement to cope with stress. Such interventions can:

- Have a direct effect on the stressor;
- Strengthen support systems to reduce the threat impact of stressors;
- Increase the harmony between the characteristics of the individual and the environment;
- Encourage personal support to buffer against the adverse consequences of stress;
- Decrease undesirable stress reactions; and
- Treat the illness and maladjustment consequences of stress (Moss, 1981).

According to Moss (1981) managers can use day-to-day events to bring about a gradual change to reduce stress. For example, managers can use the usual communication channels to find out how much leeway workers have in turning down a new assignment offered to them and under what circumstances it can be done. In this way, both managers and employees can make better, more productive choices with regard to prioritising work and coping effectively once the choices have been made. This is a better option than implementing sudden changes that influence job design, allocation of authority and responsibility, as this might create new stress. Change, even for the improvement of the work experience, requires agreement that it is necessary, useful or inevitable, so that all individuals involved will go along with a minimum of resistance and discomfort.

Once managers recognise the stressors in the workplace, they can then bring about

the gradual redesign of work.

6.3.3. Dealing With Stress

When it comes to dealing with the stress of monotonous, routine work, management should maintain close communication with employees so that they can:

- influence the rate and pace of the work;
- vary the working method;
- work with employees to deal with questions about the task at hand;
- continuously determine work methods and work rates in co-operation with others; and
- plan the working day (Aberg, 1981).

It is important to first conduct a stress audit to diagnose and proactively ascertain the sources of stress in the organisation. This can be done via survey questionnaires, interviews, group discussion sessions, observational techniques and stress logs / diaries (Quick, Quick & Nelson, in Cooper, 2000).

From here, the strategy of the stress management intervention can be determined.

6.3.4. Recommendations for Shift Work Stress Reduction

The above can especially be implemented with regard to shift work. Fatigue and the loss of social and domestic life associated with shift work has been cited as a great problem amongst shift workers at DME. According to Harrington (1978), shift work is a crucial part of industrialised socities and cannot be completely removed from it. However, organisations can incorporate two strategies to minimize the stress risks to shift workers :

- The shift rotation system; and
- Necessary preventative health measures.

The shift rotation system involves a shift change every two or three days. This will provide some positive health advantages, and minimizes the inconvenience of unpopular shifts such as night shifts. With such a scheme, shift workers will only do a night shift every second or third day.

To allow for preventative health measures with regard to shift work, the job itself needs to be assessed. If workers find the night shift stressful, it should be made as palatable as possible by employing volunteer workers or by limiting the shift to a day at a time and allowing for adequate recovery afterwards. It is important for the organisation to select night shift workers that are most suited to the job. Harrington (1978) suggests that pre-employment screening should be done to disinclude those that have diseases which might get worse with shift work, such as coronary heart disease, insulin dependent diabetes, and epilepsy. In addition, those who are employed should be educated about the problems resulting from shift work and encouraged to be careful about sleeping and eating habits to minimize the stressful effects of the job.

6.3.5. Addressing Autocracy

The problem of autocratic managers; those managers who 'take the authority of staff away'; and those who 'cannot solve work-related problems' can be resolved by a discussion between management and staff as to the delegation of influence and authority to carry out assigned responsibilities. Managers may find that once they delegate their work to others, they may not be under duress and stress to complete an insurmountable load of work in a short period of time. In addition, those employees that have taken on the responsibility of the task may achieve a sense of job satisfaction on completion of the task.

6.3.6. Control of Job Environment

Ten employees also complained that management 'cannot control the job

environment'. It might be easier for management to influence some control by getting involved in the planning of work objectives and to come to some agreement with staff as to their assigned objectives.

Further, by delegating tasks to subordinates, management may be able to exert control from the higher levels. This may help management by not allowing them to become overwhelmed by the extent of their responsibilities.

6.3.7. Work Pressure

The problem of intense work pressure is also mentioned by employees. This can be resolved by reducing certain job demands that require intense job competitiveness, productivity and advancement, and to balance these with job demands that strive for job satisfaction such as promotion or financial reward (Moss, 1981).

Time management skills, meditation, breathing exercises, exercising rational thought, and maintaining a healthy lifestyle may also play a large role in alleviating the stress incurred by this problem (Maultsby & Hendricks, 1974; Cooper & Sutherland, 2000; Wilson, 1997; and Lazarus in Palmer & Dryden, 1996)

6.3.8. Job Complexity Reduction

Eleven employees have also complained of mental exhaustion due to job complexity. This problem can be resolved by giving employees enough time to learn each new task and practice them well (Moss, 1981).

It is also important to take into account the person-environment fit and job stress. One needs to look at the extent to which the person's skills and abilities match the demands and requirements of the job, as well as whether the work environment provides the resources to meet the individual's needs or motives. Once this is determined, it is easier to place employees in positions that best suit their

capabilities and needs (McMichael & Van Harrison, in Cooper & Payne, 1979; and Edwards, Caplan & Van Harrison, in Cooper, 2000).

6.3.9. Performance Appraisal

One employee mentioned the lack of career pathing that is a cause of stress. Such lack of feedback about performance can be stressful. It is important for the organisation to provide for a performance appraisal system for all employees so that they are given due credit for their accomplishments in the workplace (Moss, 1981).

A performance management system that provides for performance counselling would also be helpful in DME.

6.3.10. Career Development

Those employees that are worried about the future of their jobs can become more certain of their career direction once they become part of a career development programme that has been implemented by the organisation. This would include continuous training, and upgrading of skills so that workers do not become obsolete.

Here too, the performance appraisal system comes into play. It is via this mechanism that employees can voice their opinions and preferences as to which path they would like their career to take. This sense of autonomy may help reduce stress levels caused by feeling helpless in one's career stage / path.

6.4. Limitations of the Research

As mentioned in Chapter Three, there are three main limitations of the research done:

(i) The sample of the research done is specific to Durban Metro Electricity and therefore, any generalisations or conclusions that are made from the results can only

be done with regard to Durban Metro Electricity itself.

(ii) When the posttest had been administered, there was an incidence of subject mortality. One subject decided to withdraw from the sample, and chose not to answer the questionnaire. This may influence the posttest scores.

(iii) The workshop was run over three days. Two days were run on a Thursday and Friday in one week. The third day was run the following Friday. The aim of this was to allow employees to become familiar with the stress reduction techniques taught at the course in the space of one week. Part of the third day served as a feedback session. The pre-test was administered on the morning of the first day of the course. The posttest was administered three weeks after the last day of the course.

The limitation here may be that three weeks is too short a time to evaluate the impact of the stress management course on the employees of DME. However, due to time limits placed on the research study, three weeks is the maximum amount of time that could be taken.

It is entirely possible that should the posttest have been administered six months after the stress management programme, the results may differ to a large extent. It is possible that many employees may forget what they have learnt in the programme, and may fall back into their stress inducing habits. Hence, if consistent monitoring is not maintained and there are no follow-up interventions, the stress management programme may only be effective for a short period of time. Further, if any structural measures (eg: job redesign, and worksite stress management centres) are implemented by the organisation, these also have to be constantly evaluated to analyse their effectiveness and benefit to employees.

6.5. Summary

The above recommendations should help to further alleviate the stress experienced by the employees of Durban Metro Electricity. A combination of both individual and organisational interventions are needed as the causes of stress mentioned by employees exist on both levels. By implementing the recommendations suggested in this chapter, DME might experience more harmonious relationships between employees and management, hence reducing hostility and stress. In addition, by extending the stress management strategies beyond that of the SMP and by including more participative management via discussion forums and the EAP, the organisation can expect to reduce its stress levels drastically.

References

Aberg, U. (1981) "Techniques in Redesigning Routine Work" in Stress, Work Design and Productivity , Corlett, E. N. and Richardson, J. (eds) Chichester, John Wiley and Sons Ltd.

Alluisi, E. A. and Fleishman, E. A. (eds) (1982) Human Performance and Productivity , Vol. 3: "Stress and Performance Effectiveness" , New Jersey, Lawrence Erlbaum Associates Inc.

Appley, M. H. & Trumbull, R. (1977) "On the Concept of Psychological Stress" in Stress and Coping, U.S.A. Columbia University.

Atkinson, W. (1999) "How much does employee fatigue cost?" in Credit Union Executive. Vol. 39 (5):25 , September / October.

Babbie, E. (1990) Survey Research Methods , California, Wadsworth Publishing Company.

Bailey, K. D. (1982) Methods of Social Research, Second Edition, London, McMillan Publishing Company Inc.

Barner, R. (1996) "The new millennium workplace : Seven changes that will challenge managers and workers" in Futurist, Vol. 30 (2) :14 - 18 March / April.

Basckin, J. (1996) Against the Current Labour and Economic Policy in South Africa, Randburg, South African Ravan Press.

Bennet, R. (1994) Organisational Behaviour, Second Edition, London, Longman Group UK Limited.

Bisseker, C. (1998) "Not just a case of babalas: depression and corporate stress" in Financial Mail September 18, Vol. 150 (10): 37- 38.

Bothma, H. A. (1992) An analysis of stress amongst management in a textile company and the formulation and implementation of a stress management program, University of Natal, Durban.

Understanding Stress (1996), Brockhampton Reference, London, Brockhampton Press.

Brownlee, M (2001) "10 Breaths to a Healthier You" in Marie Claire, May 2001.

Bryman, A. and Cramer, D.(1990) Quantitative Data Analysis for Social Scientists, London, Routledge.

Carver, C.S., Scheier, M.F. and Weintraub, J.K. (1989) "Assessing Coping Stategies: A theoretical based approach: in <u>Journal of Personality and Social Psychology,</u> Vol. 56, (2): 267 - 283.

Cooper, C.L. & Payne, R. (1979) <u>Stress at Work,</u> Chichester, John Wiley and Sons Ltd.

Cooper, C. L. (2000) <u>Theories of Organisational Stress,</u> Oxford, Oxford University Press

Corlett, E. N. and Richardson, J. (1981) <u>Stress, Work Design and Productivity,</u> Chichester, John Wiley and Sons Ltd.

Cox, T. and Mackay, C. (1981) "A Transactional Approach to Occupational Stress" in <u>Stress, Work Design and Productivity,</u> Corlett, E. N. and Richardson, J. (eds), Chichester, John Wiley and Sons Ltd.

Craig, M. (1991) <u>Office Workers' Survival Handbook: Fighting Health Hazards in the Office,</u> London, The Women's Press.

Cranwell-Ward, J. (1995) "When the going gets tough" in <u>People Management,</u> Vol. 1 (13): 22-25.

Dew, J. R. (1998) "Go with the flow: Stress and the quality professional" in <u>Quality Progress,</u> Vol. 31 (12): 65-68.

Dey, I. (1993) <u>Qualitative Data Analysis,</u> First Edition, New York, Routledge.

Dobson, C. B. (1982) <u>Stress, The Hidden Adversary,</u> Lancaster, MTP Press Ltd.

Douglas, M. E. (1996) "Creating eustress in the workplace: A supervisor's role" in <u>Supervision,</u> Vol. 57 (10): 6-9.

Dugmore, H. (1998) "Breaking Point : Are South African Executives Working Too Hard?" in <u>Style,</u> May : 82-88.

Durban Metro Electricity Annual Report (1997/1998).

Dutton, G. (1998) "Cutting -edge stressbusters" in <u>Human Resource Focus</u> Vol. 75 (9): 11- 12.

Edwards, J. R. (2000) "Cybernetic Theory of Stress, Coping and Well-Being" in Cooper, C. L. (ed) <u>Theories of Organisational Stress,</u> Oxford, Oxford University Press.

European Agency for Safety and Health at Work (2001) "Research on work Related Stress",
http://agency.osha.eu.int/publications/reports/stress/php3

Everly, G.S. Jnr. (1990) <u>A Clinical Guide to the Treatment of the Human Stress Response</u>, New York, Plenum Press.

Fay, D., Sonnentag, S. and Frese, M. (2000) " Stressors, Innovation and Personal Initiative: Are Stressors Always Detrimental?" in Cooper, C. L. (ed) <u>Theories of Organisational Stress</u>, Oxford, Oxford University Press.

Fontana, D. (1990) <u>Managing Stress</u>, Leicester, Routledge.

Genazzani, A. R., Nappi, G., Petraglia, F., & Martignoni, E., (1991) <u>Stress and Related Disorders:from adaptation to dysfunction</u>, The Parthenon Publishing Group Inc.

Goldberg, D. P. (1972) <u>The Detection of Psychiatric Illness By Questionnaire</u>, Institute of Psychiatry, Mansley Monographs, Oxford University Press.

Harrington, J. M. (1978) <u>Shift Work and Health: A Critical Review of the Literature</u>, London, Her Majesty's Stationery Office.

Hollway, W. (1991) <u>Work Psychology and Organisational Behaviour: Managing the Individual at Work</u>, London, Sage Publications Ltd.

Hurd, M. J. (1996) "Stress Busting: 13 Principles of Stress Management" in <u>Living Resources Psychotherapy Centre Booklet</u>.

International Labour Organisation (2001) "Safework: Developing a Workplace Stress Prevention Programme",
http://www.ilo.org/public/english/action/safework/stress/prevpgm.html

Krohe, J. Jnr. (1999) "Workplace stress" in <u>Across the Board</u>, Vol. 36 (2): 36 - 42 .

Lazarus, R. S. (1977) "Cognitive and Coping Processes in Emotion", in <u>Stress and Coping</u>, U.S.A., Columbia University Press.

Leatz, C.A., & Stolar, M.W. (1993) <u>Career Success/ Personal Stress, How to Stay Healthy in a High - Stress Environment</u>, London, McGraw Hill.

Levi, L. (1981) <u>Preventing Work Stress</u>, London, Addison-Wesley Publishing Company.

Lewis, D. (1997) <u>One Minute Stress Management</u>, Canada, Cedar Publishing.

Maitland, A. (2001) "Report Criticises Stress-Management Programmes", http://careers.iafrica.com/careerjunction/personalplanning/269938.html

Maultsby, M. C. & Hendricks, A. (1974) <u>You and Your Emotions</u>, Appleton, Rational Self-Help Books.

Maynard, R. (1996) "Stress in the workplace" in <u>Management Accounting</u>, London. Vol. 74 (7): 63-64.

McDonald, N. and Doyle, M (1981) <u>The Stresses of Work</u>, Surrey, Nelson and Sons Ltd.

Midgley, S. (1997) "Pressure Points" in <u>People Management</u>, Vol 3 (14) :36-39.

Miechenbaum, D. (1985) <u>Stress Inoculation Training</u>, United Kingdom, Pergamon Press.

Miles, M. B. & Huberman, A. M. (1994) <u>Qualitative Data Analysis</u>, (2nd edition), London, Sage Publications.

Moss, L. (1981) <u>Management Stress</u>, London, Addison-Wesley Publishing Co.

Newton, T. (1995) <u>Managing Stress : Emotion and Power at Work</u>, London, Sage Publications.

Oyen, H.B. (1998) "Thriving on Pressure" in <u>British Journal of Administrative Management</u>, January / February : 18.

Palmer, S. (2000) "Problem-Focused Stress Counselling and Stress Management Training: An Intrinsically Brief Integrative Approach", "http://www.isma.org.uk/stresscoun1.htm

Palmer, S. & Dryden , W. (1995) <u>Counselling for Stress Problems</u>, London, Sage Publications.

Palmer, S (2001) " Total Success Stress Management: A Different Type of Training" http://ourworld.compuserve.com/home_success/Stress_Management.html

Patton, M. Q. (1980) <u>Qualitative Evaluation Methods</u>, London, Sage Publications.

Quick, J. D., Quick, J. C. and Nelson, D. L. (2000) " The Theory of Preventative Stress Management in Organisations" in Cooper, C. L. (ed) Theories of Organisational Stress, Oxford, Oxford University Press.

Randolfi, E. A. (1997) "Developing a Stress Management and Relaxation Centre for the Worksite" in Worksite Health, Vol. 4, No. 3, pp 40-44.

Ross, R. R. & Altmeier, E. M. (1997) Intervention in Occupational Stress: A Handbook of Counselling for Stress at Work, London, Sage Publications.

Senge, P. (1990) The Fifth Discipline, London, Nicholas Brealey Publishing Limited.

Senge, P. (1994) The Fifth Discipline Fieldbook , London. Nicholas Brealey Publishing Limited.

Seyle, H. (1977) " Selections from The Stress Of Life " in Stress and Coping, U.S.A., Columbia University Press.

Smith, J. (1998) "Organisational Stress and Employee Well-Being: New Perspectives", Conference Report: Cranfield University School of Management,
http://www. isma.org.uk/orgstress1.htm

Solomon, C. M. (1999) "Stressed to the limit" in Workforce , Vol 78 (9): 48-54.

Spector, P. E. (2000) "A Control Theory of the Job Stress Process" in Cooper, C. L. (ed) Theories of Organisational Stress, Oxford, Oxford University Press.

Sutherland, V. J. & Cooper, C. L. (2000) Strategic Stress Management: An Organisational Approach, Wales, McMillan Press Ltd.

Tinning, R. J. and Spry, W. B. (1981) "The Extent and Significance of Stress Symptoms in Industry: With Examples From the Steel Industry", in Stress, Work Design and Productivity, Corlett, E. N. and Richardson, J. (eds), Chichester, John Wiley and Sons Ltd.

Tyrer, P. J. (1990) How to Cope with Stress, London, Sheldon, Press.

Warr, P. (1987) Work, Unemployment and Mental Health, Oxford, Oxford University Press.

Williams, S. (1994) Managing Pressure for Peak Performance, The Positive Approach to Stress, London, Kogan Page Limited.

Wilson, P (1995) The Calm Technique: The Easy Way to Beat Stress Instantly Through Simple Meditation Techniques, London, Harper-CollinsPublishers.

Wilson, P. (1997) Calm at Work, Middlesex, Penguin Books Limited.

Worklife Report (1997) "Managing People During Stressful Times : The Psychologically Defensive Workplace" , Vol. 10 (3) : 20.

Yamauchi, K. T. (1986) "Stress Management: Ten Self-Care Techniques" in Innovations in Clinical Practice: A Source Book,Volume 5, Keller, P. A. and Ritt, L. G. (eds), Sarasota, Professional Resource Exchange.

Zuboff, S (1988) In The Age Of The Smart Machine, The Future Of Work And Power. New York, Basic Books Inc.

```
                          ┌─────────────────────────────┐
                          │  EXECUTIVE DIRECTOR (F3)     │
                          │  NO. OF POSTS 11             │
                          └─────────────────────────────┘

        ┌──────────────────────────┐   ┌──────────────────────────┐
        │ PROFESSIONAL ASSISTANT   │   │ PERSONAL ASSISTANT (228) │
        │ (SUPERNUMERARY)          │   │                          │
        └──────────────────────────┘   └──────────────────────────┘
```

| DIRECTOR : HUMAN RESOURCES (E2) NO. OF POSTS 159 | DIRECTOR : TRANSMISSION (E4) NO. OF POSTS 321 | DIRECTOR : SOUTHERN REGION (E3) NO. OF POSTS 659 | DIRECTOR : LIGHTING & WORKSHOP SERVICES NO. OF POSTS 349 |

| DIRECTOR : FINANCE (E2) NO. OF POSTS 242 | DIRECTOR : TECHNICAL SERVICES (E3) NO. OF POSTS 212 | DIRECTOR : NORTHERN REGION (E3) NO. OF POSTS 724 | DIRECTOR : CENTRAL REGION (E3) NO. OF POSTS 809 |

AMENDI\
0/8/97

TOTAL 3488

Organizational chart — Human Resources

- DIRECTOR : HUMAN RESOURCES 90004 (TK20)
- SECRETARY 90006 (TK07)

- MANAGER : TRAINING 90060 (TK15)
- MANAGER HUMAN RESOURCES ADMINISTRATION 90018 (TK13)
- SEE ATTACHED ANNEXURE "A"
- SEE ATTACHED ANNEXURE "B"

- MANAGER HUMAN RESOURCES 90014 (TK14)
  - HUMAN RESOURCES OFFICER 3 posts 90016 9000010 9000012 (TK11)
  - ASSISTANT H.R. OFFICER 95634 (TK10)
  - H.R. TRAINEE 90052 (TK05)
  - WELFARE OFFICER 90056 (TK10)

- MANAGER HUMAN RESOURCES 90010 (TK14)
  - HUMAN RESOURCES OFFICER 3 posts 95632 9000002 9000004 (TK11)
  - ASSISTANT H.R. OFFICER 90012 (TK10)
  - H.R. TRAINEE 95472 (TK05)
  - CLERK 9000008 (TK05)
  - WELFARE OFFICER 9000006 (TK10)

- MANAGER HUMAN RESOURCES 90008 (TK14)
  - HR TRAINEE 9000000 (TK05)

CENTRAL REGION MAINTENANCE DIVISION

```
                    ┌──────────────────────────┐
                    │ MANAGER AREA MAINTENANCE │
                    │    (WESTERN) (220)       │
                    └──────────────────────────┘
         ┌───────────────────────┼───────────────────────┐
┌─────────────────────┐ ┌──────────────────┐ ┌─────────────────────┐
│ SUPERINTENDENTS     │ │ CLERK OF WORKS   │ │ ADMINISTRATION      │
│ (ELECTRICAL)(3)     │ │ (229)            │ │ OFFICER (226)       │
│ (321/320)           │ │                  │ │                     │
└─────────────────────┘ └──────────────────┘ └─────────────────────┘
```

SUPERINTENDENTS (ELECTRICAL) branch

- ELECTRICIAN/SENIOR ELECTRICIAN (14) (312/311/231)
  - ELECTRICIANS ASSISTANTS (28) (348)
- HANDYMAN (LINE CLEARANCE) (3) (329)
  - CLEARANCE ASSISTANTS (9)(348)
- GANGER DRIVER (328)
  - GENERAL WORKERS (7) (347)
- FAULTSMEN (7) (231)
  - FAULTSMENS ASSISTANTS (7) (348)
- HANDYMAN (MAINTENANCE) (329)
  - GENERAL WORKER (347)

ADMINISTRATION OFFICER branch

- DEPOT SUPERVISOR (232)
  - DEPOT SUPERVISORS ASSISTANT
  - TEAM LEADER (GRADE II) (348)
  - FUEL/STORES ASSISTANT (348) (3) (GRADE II)
  - GENERAL WORKER (347) (11)
  - DEPOT MACHINE OPERATOR
- SENIOR CLERK (GRADE I) (233)
  - CLERK (GRADE I) (2) (252)
- MAINTENANCE ASSESSOR
- DRIVER/OPERATOR (2) (329)
  - GENERAL WORKERS (4) (347)

METAMEND51

SOUTHERN REGION CONSTRUCTION
DIVISION

```
                                          ┌─────────────────────────────┐
                                          │ MANAGER AREA CONSTRUCTION   │
                                          │   (SOUTH WESTERN) (120)     │
                                          └─────────────────────────────┘
```

| SUPERINTENDENT (ELECTRICAL) (321/320) | SUPERINTENDENT (ELECTRICAL) (321/320) | SUPERINTENDENT (ELECTRICAL) (321/320) | SUPERINTENDENT (ELECTRICAL) (321/320) | CONSTRUCTION ASSESSOR (2) (328) | CONSTRUCTION ASSISTANT (328) | CLERK OF WORKS (2) (219) | SENIOR CLE... (2... |

| TRADE WORKER/ELECTRICIAN /SNR. ELECTRICIAN (5) (?) | TRADE WORKER/ELECTRICIAN /SNR. ELECTRICIAN (6) (?) | TRADE WORKER/ELECTRICIAN /SNR. ELECTRICIAN (4) (?) | TRADE WORKER/ELECTRICIAN /SNR. ELECTRICIAN (5) (?) | | GENERAL WORKER (347) | | |

| ELECTRICIANS ASSISTANT (348) (10) | ELECTRICIANS ASSISTANTS (348) (12) | ELECTRICIANS ASSISTANTS (348) (8) | ELECTRICIANS ASSISTANTS (348) (10) |

| CABLE LAYER/SENIOR CABLE LAYER (239/238) | CABLE LAYER/SENIOR CABLE LAYER (239/238) | CABLE LAYER/SENIOR CABLE LAYER (239/238) | CABLE LAYER/SENIOR CABLE LAYER (239/238) |

| TEAM LEADER (GRADE I) (349) | TEAM LEADER (GRADE I) (349) | TEAM LEADER (GRADE I) (349) | GENERAL WORKER (7) (347) |

| GENERAL WORKERS (347)(15) | GENERAL WORKERS (347)(15) | GENERAL WORKERS (347)(15) | TRADE WORKER/ELECTRICIAN /SNR. ELECTRICIAN (?) |

| | HANDYMAN (CONSTRUCTION) (2) (329) | | GENERAL WORKER (347) (7) |

| | GENERAL WORKER (6) (347) | | |

General Information Questionnaire

The research that is being done aims to assess the efficiency and success of the stress management programme in reducing the stress levels of employees at Durban Metro Electricity. As a result, the following questionnaires shall have to be answered before the stress management programme commences, as well as two to three weeks after it has ended. This will aid in establishing whether the stress management skills learnt in the programme have had any effect in alleviating the stress that employees experience.

Directions:
This questionnaire aims to identify the specific stressors that you, as an employee experience at Durban Metro Electricity. Please note, there are no right or wrong answers, and the information received from this questionnaire shall be handled confidentially.

Biographical Details

Please place an "X" in the appropriate column.

[1] Occupation:

manager	
supervisor	
electrician	
other (please state)	

[2] Race:

White	
Asian	
Black	
Coloured	

[3] Gender:

Male	
Female	

[4] Age:

Below 20	
20 - 25	
25 - 30	
30 - 40	
40 - 50	
50 and over	

[5] Marital status:

Married	
Single	

[6] Number of dependants:

0	
1	
2	
3	
4	
5	
more than 5	

[7] Location

....

[8] Contact number

....

General Information

[9] What (if any) aspects of your job are stressful for you?

(a)...

(b)...

(c)...

[10] Please state why these aspects are stressful.

(a)...

(b)...
....
....

(c)...
....
....

[11] Kindly identify and describe how these stressful aspects of your job affect you, ie:emotionally, physically and / or mentally.

(a)...
....
....
....

(b)...
....
....
....

(c)...
....
....
....

[12] Can you suggest any ways in which the stress can be managed (either personally, or through work) ?

(a)...
....

(b)...
....

(c)...
....

State-Trait Anxiety Inventory : Part 1

Directions:

Below, are a number of statements that people use to describe themselves. Read each statement, and then place an "X" in the appropriate column on the right of the statement to indicate how you feel at this very moment. Do not spend too much time on any one statement, but place an "X" in the column which seems to describe your present feelings best. Please note, there are no right or wrong answers.

	Not at all	Somewhat	Moderately so	Very much so
I feel:				
[1] calm				
[2] secure				
[3] tense				
[4] regretful				
[5] at ease				
[6] upset				
[7] presently worrying over possible misfortunes				
[8] rested				
[9] anxious				
[10] comfortable				
[11] self-confident				
[12] nervous				
[13] jittery				
[14] "high strung"				
[15] relaxed				

	Not at all	Somewhat	Moderately so	Very much so
· I feel: [16] content				
[17] worried				
[18] over-excited and "rattled"				
[19] joyful				
[20] pleasant				

State - Trait Anxiety Inventory : Part 2

Directions:

Below are a number of statements which people use to describe themselves. Please read each statement carefully, and then place an "X" in the appropriate column to the right of the statement, to indicate how you generally feel. Do not spend too much time on any one statement, but give the answer you think best describes how you generally feel. Remember, there are no right or wrong answers.

	Almost never	Sometimes	Often	Almost Always
[21] I feel pleasant				
[22] I tire quickly				
[23] I feel like crying				
[24] I wish I could be as happy as others seem to be				
[25] I am losing out on things because I cannot make up my mind soon enough				
[26] I feel rested				
[27] I am 'calm, cool and collected'				
[28] I feel that difficulties are piling up, and I cannot overcome them				
[29] I worry too much about something that really does not matter				
[30] I am happy				

	Almost never	Sometimes	Often	Almost Always
[31] I am inclined to take things hard				
[32] I lack self confidence				
[33] I feel secure				
[34] I try to avoid facing a crisis or a difficulty				
[35] I feel blue				
[36] I am content				
[37] Some unimportant thought runs through my mind and bothers me				
[38] I take disappointments so keenly that I can't put them out of my mind				
[39] I am steady person				
[40] I get in a state of tension or turmoil as I think over my recent concerns and interests				

General Health Questionnaire

This questionnaire aims to find out how your health is in general, as well as if you have any medical complaints. In addition, it is trying to guage how your health has been over the past few weeks.

It would be most appreciated if you would answer **ALL** the questions in this questionnaire, by underlining the appropriate answer, ie: the answer that applies most to you. Please note, it is important that you answer the questions according to the current and recent complaints that you have, not those that you have experienced in the past.

Have you recently

[1] been able to concentrate on whatever you are doing?	better than usual	same as usual	less than	much less than usual
[2] lost much sleep over worry?	not at all	no more than usual	rather more than usual	much more than usual
[3] been managing to keep yourself busy and occupied?	more so than usual	same as usual	rather less than usual	much less than usual
[4] been getting out of the house as much as usual?	more than usual	same as usual	less than usual	much less than usual
[5] felt on the whole you were doing things well?	better than usual	about the same	less well than usual	much less well
[6] been satisfied with the way you've carried out your task	more satisfied	about the same as usual	less satisfied than usual	much less satisfied
[7] felt that you are playing a useful a useful part in things	more so than usual	same as usual	less useful than usual	much less useful
[8] felt capable of making decisions about things	more so than usual	same as usual	less so than usual	much less capable

[9] felt constantly under strain	not at all	no more than usual	rather more than usual much more than usual
[10] felt that you could not overcome your difficulties	not at all	no more than usual	rather more than usual much more than usual
[11] been able to enjoy your normal day-to-day activities	more so than usual	same as usual	less so than usual much less than usual
[12] been taking things hard?	not at all	no more than usual	rather more than usual much more than usual
[13] been able to face up to your problems	more so than usual	same as usual	less able than usual much less able
[14] found everything getting on top of you	not at all	no more than usual	rather more than usual much more than usual
[15] been feeling unhappy and depressed	not at all	no more than usual	rather more than usual much more than usual
[16] been losing confidence in yourself	not at all	no more than usual	rather more than usual much more than usual
[17] thinking of yourself as a worthless person	not at all	no more than usual	rather more than usual much more than usual
[18] been feeling reasonably happy all things considered	more so than usual	about same as usual	less so than usual much less than usual
[19] been feeling nervous and strung up all the time	more so than usual	about same as usual	less so than usual much less than usual
[20] found at times you couldn't do anything because your nerves were too bad	more so than usual	about same as usual	less so than usual much less than usual

DURBAN METRO

Corporate Training and Development
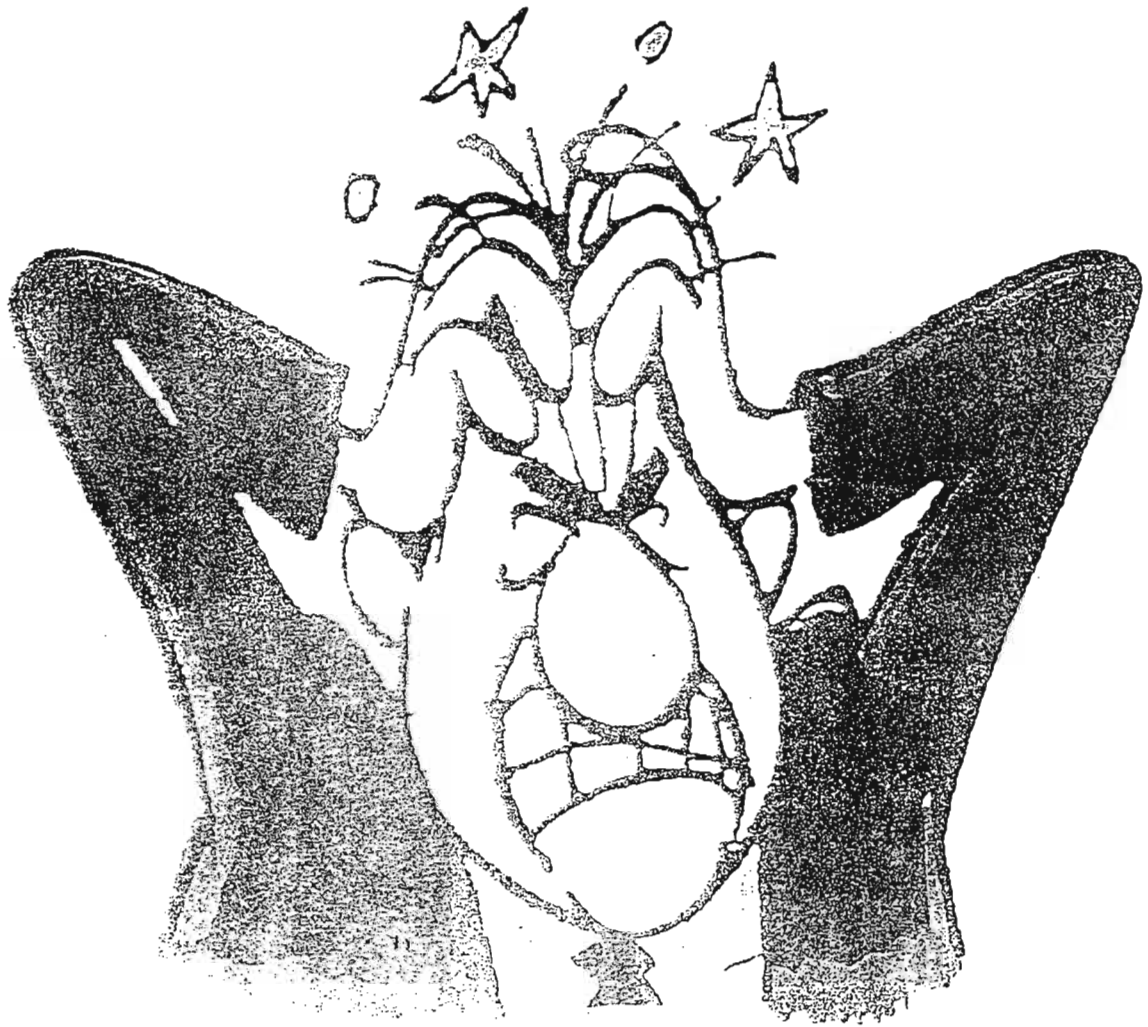
STRESS MANAGEMENT

INTRODUCTION

Stress is an inevitable part of living. To be alive is to change. Our <u>reaction</u> to change is the essence of stress. Since we cannot avoid stress, we must learn to deal with it effectively. If we do not control our stress - it will control us.

Learning to enjoy the challenge of stress will take time and practice. It can however also be fun as you see yourself becoming more and more able to cope with and enjoy life.

This course will provide with the tools or skills for effective stress management but it is your choice what use you make of them. If you practice these skills daily you <u>will</u> benefit from this course. Stress management is not a <u>cure-all</u>. Instead it is a change in lifestyle and a new way of viewing the world.

Effective stress management is a life long process. It requires commitment from <u>you</u> to make the necessary changes in your life - no one can make them for you!

Remember that only <u>YOU</u> can make the difference in your life.

You cannot change others - only yourself.
Your own attitude can make the difference

YOU HAVE THE

CHOICE

WHAT IS **STRESS?**

Stress Test

This test is designed to help you assess your knowledge concerning stress. Please mark either YES or NO for each statement, according to whether or not you agree with it.

YES ⁞ NO

_____	1.	Stress is unavoidable.
_____	2	A lover's kiss and an interview with a prospective employer both involve a stress response.
_____	3	Stress can be good for you.
_____	4.	Breathing plays a role in the stress response.
_____	5.	Happy, healthy staff are more productive than staff motivated by fear.
_____	6	The definition of distress is a state of danger and may involve feelings of inadequacy, lack, and loss of control
_____	7	Stress is cumulative. (i.e. it increases in force).
_____	8	You can overload the body with stress, causing it to breakdown
_____	9	All employees, regardless of position, experience stress. No one can avoid stress.
_____	10.	Your attitude about stress can make a difference between health and disease.
_____	11.	The right kind of stress can save your life.
_____	12.	Mental and physical health are interlinked.
_____	13.	You can prevent absentee days by promoting health habits

3

_____ 14. Disease is stress related.

_____ 15. Producing excellent-quality work need not be distressing.

_____ 16. Working at any job, however satisfying, is stressful.

_____ 17 Humour on the job is appropriate.

_____ 18. All those around me, including my customers, suffer if I am distressed.

_____ 19 I can do something about stress at work.

_____ 20. Two people can experience the same situation, but have a different stress response to it.

Total score   YES _____   NO _____

WHAT IS STRESS?

Stress is the individual response to a stressor, a stimulus, or a set of circumstances that induces a change in the individual's ongoing physiological and / or psychological functioning.

What is the Difference Between "Pressure" and "Stress"

Pressure:- Refers to those features of a situation that might be problematic for the individual and demands some kind of adaption.

Stress:- Refers to a specific set of biochemical conditions within a person's body, which reflect the body's attempt to make the adjustment.

In short:- Pressure is in the situation.
Stress is in the person.

Different people may react differently to the same situation. Therefore we can say that stress lies in our perception of a situation, where the demand appears to exceed our available resources, and where the outcome is important.

Stress often a result of our own interpretations - it is our belief in whether we can cope or not that determines our stress level.

Positive Stress / Eustress

In positive stress the perceived demands of the situation are challenging, interesting and exciting, but are felt to be within the coping abilities and resources of the individual.

Negative Stress / Distress

Negative stress occurs when the actual demands of the situation are greater than the person's coping abilities and resources. Negative stress may also occur when perceived demands of the situation out weigh the person's perception of their own coping abilities and resources.

Thus, when the person feels helpless, anxious, scared, frustrated, and unable to cope, negative stress results, which leads to unhealthy physical, behavioural and emotional symptoms.

Too Little Stress

Occurs when the actual demands of the situation are far less than the person's coping abilities and resources. This also produces the negative stress response in the form of unhappy feelings, boredom, frustration, irritability and a lack of meaning and purpose.

FIGHT/FLIGHT RESPONSE (A stress response)

When we experience a situation as threatening or fearful a chain of events is triggered within our central nervous system.

In less than 8 seconds the stress chemicals, like Adrenalin, have reached every cell in the body. The nerve pathways alert the heart, lungs and muscles for increased action. Brain activity increases, hearing becomes more acute, the pupils of the eyes dilate, making vision more sensitive.

The stress reaction is a massive chemical mobilization of the entire body to meet the requirements of a life-and-death struggle or of rapid escape from the situation. The intensity of the stress reaction depends on the brain's perception of the severity of the situation.

The modern business person does not always have this option of fleeing or fighting. Why?

Fight/Flight response

Under stress the body chooses fight or flight

A Stress Model

PRESSURE

Internal
External

RESPONSE

CONSEQUENCES
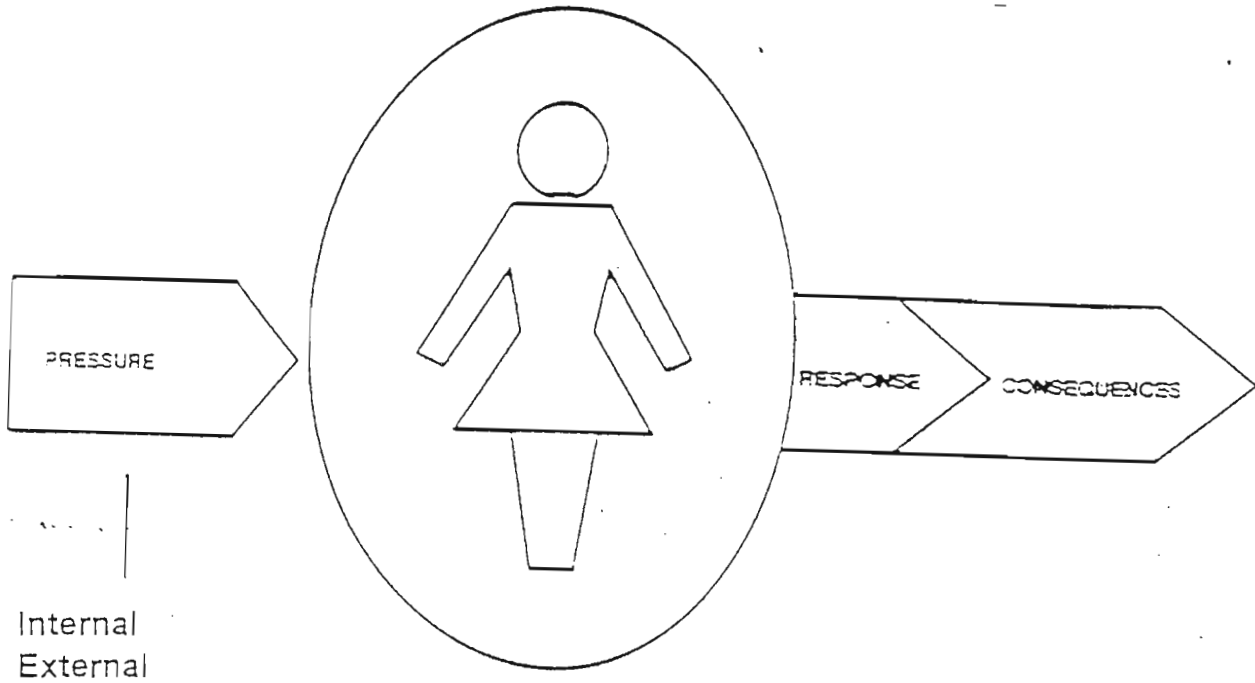
Resources

Physical
Emotional
Mental
Social / relationships
Coping skills

You're going to worry yourself sick...

How many times have we heard this phrase, all the time not quite comprehending the real meaning behind it. Researchers have discovered that stressing out has a serious effect on the immune system. There is a connection between our psychological state and our vulnerability to illness. In a US study 400 people were given virus-laden nose drops and those who had the highest stress levels were three and a half times more likely to be infected with the cold-producing virus than those who were not similarly angst-ridden.

Bad temper equals bad health

. if you're suffering from repeated infections. you may have to lighten up. Studies show that stress and mood are important factors in whether or not you fall ill. Highly stressed people are more likely to catch a cold, and angry, self-centred people tend to get worse colds than people who are cheerful and positive. Some researchers have even suggested that there is a link between various personality traits and more serious diseases. Repressed hostility and depression, for example, have been linked with heart disease. and cancer has been linked with passivity and an inability to express emotion. But before you switch your GP for a psychotherapist, further studies suggest taking your lifestyle into account. When we feel under pressure, we let our lifestyles deteriorate. We stop exercising, withdraw from family and friends, and don't take holidays. Stimulants that undermine the functions of the immune system, such as cigarettes. excess coffee, alconol and other drugs, become our daily coping mechanisms, putting us at risk of disease. For tips on how to combat flu, one of the most common diseases caused by a battered immune system, read on ...

SICK and tired of flu?

Claire Jamieson runs a thriving Well-Woman practice in Cape Town states "the rebound syndrome of flu-like illness we see in patients is a problem of lifestyle. It's an indicator of how stressed people are - and their immune systems become depressed because of it."

One of the most effective ways of combatting stress is to get enough sleep. 'It restores the body. If you're deprived of sleep, you won't function properly - either physically or mentally. Ideally you should get eight hours sleep a night. If you constantly wake up tired. you could be deprived of sleep.'

Psychoneuro immunology - the technical name for a healthy resistance - is strongly endorsed by Dr. Geraldine Miton, medical director of the Hydro at Stellenbosch.

"If you are in peak physical condition, your immune system should be functioning optimally and you should be resistant to most illnesses. The mere fact that you've got flu indicates that you were functioning below your best anyway.'

Like Claire Jamison. Mitton believes in the value of rest to boost your immune system.

'Everyone needs at least half an hour a day of quiet time alone. What you do in that time is up to you. You don't necessarily have to do yoga or meditate; it's as beneficial to watch the sunset, listen to Mozart. or simply sit and think.'

JO'BURG-BASED nutrition guru Dr Alan Tomlinson, who heads up supplements trailblazer Sportron and often does the nutrition lecture circuit in the States, also chants the compromised immunity refrain. 'We all lead compromised lives. So it's no surprise that we're susceptible to whatever opportunistic infections are around. And they'll attack the weak. not the strong. The key to good health is high vitality.'

Laughter really is the best medicine

HELEN CARROLL

If you want to reach a ripe old age, put a smile on your face, say researchers.

Scientists have discovered that a group of life-enhancing chemicals are triggered when we burst into laughter.

These powerful hormones can boost the immune system, helping to ward off colds and flu, and might even help fight cancer.

Arthur Stone, a professor of psychoneural immunology at the State University of New York, has published a paper outlining the most conclusive evidence yet of a link between laughter and the levels of immunoglobulin A, an anti-body found in the mucus which lines the nose.

The university professor asked 72 men to fill in a form every evening for 12 weeks describing how good their day had been.

Each of the participants also gave a daily mucus sample.

Professor Stone said: "On days when they laughed a lot there was more antibody and on bad days there was much less.

"Those people who had less antibodies were more prone to colds and other infections."

Immunoglobulin A helps fight illness by identifying bacteria, viruses and potential tumour cells, which are then destroyed by white blood cells.

Perhaps surprisingly, the research also shows that smoking and drinking can boost levels of these hormones.

Chocolate, normally said to be bad for the health because of its high cholesterol and calorie count, is also one of the biggest triggers.

Veteran comedian Bernard Manning, 66 said laughter was a medicine which some people did not get enough of.

"I've always been a laugher and I've never seen the inside of a hospital," he added.

Unfortunately, the tendency to laugh decreases with age.

An average six-year old laughs 300 times a day but by adulthood the daily tally has slumped to 47. Some sad individuals struggle to reach six chuckles a day.

Women laugh more that men, particularly when they are talking.

Burnout

Burnout defined

Herbert Freudenberger who claims credit for the term, says it is:

"Someone in a state of fatigue or frustration brought about by devotion to a cause, way of life or a relationship that failed to produce the expected reward."

Burnout is a depletion of energy and a feeling of being overwhelmed by problems.

Christina Maslach: "Burnout is a syndrome of emotional exhaustion. depersonalisation and reduced personal accomplishment that can occur among individuals who do people work of some kind."

In short: Burnout is a state of mental and physical exhaustion brought on by continued stress. Burnout is the end result of prolonged, job-related or personal stress.

Continuum: Prolonged ⇒ Burnout ⇒ Depression

Who gets Burnout?

People who:

- try to do it all on their own.
- push themselves too hard for too long.
- are idealistic and perfectionists.
- are responsible, committed, highly motivated and energetic.
- expect too much of themselves and others.
- tend to perform above overage.
- are expected by others to perform 'record-breaking' results.
- can't say no.
- don't admit to their limitations.
- are counted on to do more than their share.
- bottle up their feelings.
- tend to be leaders and are better educated.
- are involved in 'people work' of some kind.
- are 'Type A' personality.
- have not had their expectations met, have become worn down and tired out because what one thought would happen has not come about.
- workaholics.

Examples of Burnout cases:

- ◆ The nurse who no longer responds to the patients buzzer
- ◆ The mental health worker who does not care anymore
- ◆ The business executive who is unable to function at his/her pervious level
- ◆ The factory worker who does not return after lunch

Symptoms of Burnout

1. **Mental / Emotional**

   - loss of meaning in life, begin to question life, friendship, etc
   - self doubt, disillusioned, feelings of emptiness
   - sense of helplessness
   - difficulty in concentrating
   - anger, cynicism, increased irritability, disorientation and confusion, frustrated, cranky
   - negativity
   - a sense of 'dulling and deadness'
   - lowered self-esteem
   - loss of self control, depression, suicidal thoughts, paranoia
   - attitudes of:
     - a job is a job is a job
     - just put time, not making any waves, just going through the motions, barely getting by

2. Physical

   - all stress symptoms but especially exhaustion and a lack of energy
   - lots of psychosomatic complaints

3. Social / Work

   - aloof and a detachment from interpersonal closeness
     - an attitude of 'I wish people would go away and leave me alone'
   - detachment leads to depersonalisation
   - drop in personal accomplishment which leads to a drop in feeling of personal adequacy which leads to a further drop in personal accomplishment
   - a vicious cycle of burnout is reached
   - change in work 'style - colleague way withdraw, or conversely become more demanding, inflexible, etc.
   - unable to keep up with usual standards of performance and activity.
   - absenteeism.
   - increased indecision, less attention to personal grooming and health.

Are you burning out?

Look back over the past six months. Have you been noticing changes in yourself or in the world around you? Think of the office .... the family ..... social situations. Allow about 30 seconds for each answer. Then assign it a number from 0 (no change) to 5 (for a great deal of change) to designate the degree of change you perceive.

1. Do you tire more easily? Feel fatigue rather than energetic?
2. Are people annoying you by telling you, "you don't look so good lately"?
3. Are you working harder and harder and accomplishing less and less?
4. Are you increasingly cynical and disenchanted?
5. Are you often invaded by a sadness you can't explain?
6. Are you forgetting? (Appointments, deadlines, personal possessions)
7. Are increasingly irritable? More short-tempered? More disappointed in the people around you?
8. Are you seeing close friends and family members less frequently?
9. Are you too busy to do even routine things like make phone calls or read reports or send out Christmas Cards?
10. Are you suffering from physical complaints? (Aches, pains, headaches, a lingering cold)
11. Do you feel disoriented when the activity of the day comes to a halt?
12. Is joy elusive?
13. Are you unable to laugh at a joke about yourself?
14. Does sex seem like more trouble than it's worth?
15. Do you have very little to say to people?

Very roughly. now, place yourself on the Burnout scale. Keep in mind that this is merely an approximation of where you are, useful as a guide on your way to a more satisfying life. Don't let a high total alarm you, but pay attention to it. Burnout is reversible, no matter how far along it is. The higher number signifies that the sooner you start being kinder to yourself, the better.

THE BURNOUT SCALE

0-25	You're doing fine
26-35	There are some things you should be watching
36-50	You're a candidate
51-65	You are burning out
over 65	You're in dangerous place, threatening to your physical and mental well-being.

GROUP WORK

List the sources of STRESS in your work and personal lives.

Work	Personal

List the sources of STRESS in your work and personal lives.

VIDEO: Coping with Self - Clayton Barbeau

Write down the key points to the video.

[handwritten notes, largely illegible]

IF I HAD MY LIFE OVER AGAIN

(Written by an 85 year old man dying of cancer. Taken from Dr. Buscaglia's video - "Only You Can Make the Difference")

If I had my life to live over again
I'd not be afraid of more mistakes next time -
In fact I'd relax a lot more
I'd limber up
I'd be sillier than I'd been on this trip
In fact, I know of very few things I'd
take so seriously
I'd take more chances
I'd take more trips
I'd climb more mountains
I'd swim more rivers
I'd sit and watch more sunsets
I'd go to places I'd never been before
I'd eat more ice-cream and fewer beans
I'd have more actual troubles and fewer imaginary ones
You see, I was once of those people who
lived prophylactically and sanely and sensibly
hour after hour, day after day
Oh I've had my moments and if I
had to live all over again I'd tray to have
more of those moments - In fact, I'd
try to have nothing else but wonderful
moments side by side - instead
of living so many years ahead of my time,
I was one those people who never
went anywhere without a thermometer,
hot water bottle, gargle, raincoat and
a parachute.
If I had to do it all over again I'd
travel lighter next time,
I'd play with more children
Pick more daisies
I'd love more if I had my life
to live over again
But you see - I don't ....

RECOGNIZING "TYPE A" vs "TYPE B" BEHAVIOUR

When heart disease become our nation's number one killer, it was thought that anyone leading a stressful lifestyle was at risk. It is now well-known that there is a certain behaviour pattern called "Type A", which makes one more susceptible to coronary heart disease and other stress-related diseases because of specific character traits and mental attitudes. Many of these traits and attitudes are the reason for stress symptoms in the first place.

Modifying Type A behaviour patterns in order to relieve stress symptoms requires that we defect the traits ourselves that make us either "Type A" or "Type B" individuals. We can use stress management techniques to gradually condition ourselves to alter those traits.

Following are some differences between "Type A" individuals and "Type B" individuals. Not all "Type A's" and "Type B's will necessarily have all these traits, but people tend to all into one or the other category.

"Type A" Characteristics

- intensively competitive
- impatient
- achievement orientated
- aggressive and driven
- have a distorted sense of time urgency
- move rapidly and frequently
- talks fast and listen impatiently
- Prone to anger and temper outbursts

"Type B" Characteristics

- relaxed and unhurried
- patient
- non-competitive
- non-aggressive
- no time urgency

In addition to these basic traits, "Type A" individuals have a greater cardiovascular response to stress, a greater increase in blood pressure, a greater release of adrenalin, higher blood cholesterol levels, and more extensive arteriosclerosis than "Type B" individuals probably do not have all these problems at the same time, but normally they have enough of them to increase drastically their chances of becoming sick or diseased much sooner than "Type B" individuals.

TYPE A BEHAVIOUR QUIZ

Many times, stress symptoms are the direct result of Type A behaviour. Unless we become aware of our own Type A traits, recognizing stress symptoms and linking them to stress sources can be very difficult. The following quiz is designed to give you an idea of your own behavioural type. Read each statement carefully and then circle the number corresponding to the category of behavoiur that best fits you. (1=never; 2=seldom; 3=sometimes; 4=usually; 5=always). When you finish, add up all the circled numbers. A key at the end of the quiz will explain what your total score means.

1.	I become angry or irritated whenever I have to stand in line for more than 15 minutes.	1	2	3	4	5
2.	I handle more than one problem at a time.	1	2	3	4	5
3.	It's hard finding the time to relax and let myself go during the day.	1	2	3	4	5
4.	I become irritated or annoyed when someone is speaking too slowly.	1	2	3	4	5
5.	I try hard to win at sports or games.	1	2	3	4	5
6.	When I lose at sports or games. I get angry at myself or others.	1	2	3	4	5
7.	I have trouble doing special things for myself.	1	2	3	4	5
8.	I work much better under pressure or when meeting deadlines.	1	2	3	4	5
9.	I find myself looking at my watch whenever I'm sitting around or not doing something active.	1	2	3	4	5
10.	I bring work home with me.	1	2	3	4	5
11.	I feel energized and exhilarated after being in a pressure situation.	1	2	3	4	5
12.	I feel I need to take charge of a group in order to get things moving.	1	2	3	4	5
13.	I find myself eating rapidly in order to get back to work.	1	2	3	4	5
14.	I do things quickly regardless of whether I have time or not.	1	2	3	4	5
15.	I interrupt what people have to say when I think they're wrong.	1	2	3	4	5
16.	I'm inflexible and rigid when it comes to changes at work or at home.	1	2	3	4	5
17.	I become jittery and need to move whenever I'm trying to relax.	1	2	3	4	5

18.	I find that I always eat too quickly.	(1)	2	3	4	5
19.	At work, I need to perform more than one task at a time in order to feel productive.	(1)	2	3	4	5
20.	I take less vacation time than I'm entitled to.	(1)	2	3	4	5
21.	I find myself being very picky and looking at small details.	(1)	2	3	4	5
22.	I become annoyed at people who don't work as hard as I do.	(1)	2	3	4	5
23.	I find that there aren't enough things to do during the day.	1	2	(3)	4	5
24.	I spend a good deal of my time thinking about my work.	(1)	2	3	4	5
25.	I get bored very easily.	1	(2)	3	4	5
26.	I'm active on weekends either working or doing projects.	1	2	3	(4)	5
27.	I get into arguments with people who don't think my way.	(1)	2	3	4	5
28.	I have trouble "rolling with punches" whenever problems arise.	(1)	2	3	4	5
29.	I interrupt someone's conversation in order to speed things up.	(1)	2	3	4	5
30.	I take everything I do seriously.	1	2	(3)	4	5

The minimum score is 30, the maximum is 150. The breakdown by personality type is as follows:

SCORE | PERSONALITY TYPE

100-150 | Type A
76 - 99 | Type AB (average)
30 - 75 | Type B

If your score was 75 or below, you are a "Type B" person. You pretty much take life as it comes and do not allow problems and worries to dominate your life. If your score was in the range of 76 - 99, you are part of a majority who has some "Type A" and some "Type B" characteristics. For the most part, you do take time out to relax and are not very aggressive or competitive. You do, however, take some things seriously and in certain situations, like to be active, competitive and productive. You need to see which "Type A" traits you have and decide whether or not they are affecting your health and lifestyle. If your and you need to work on your attitudes, behaviour and priorities, before you become seriously ill.

Because every person is different, there really are no absolute right or wrong answers. What may be a traumatic experience for one person, may be a positive experience for someone else. But no one, regardless of how energized and excited stress makes them feel, can keep up too many "Type A" behaviour patterns and stay healthy for very long. In fact, it is well known that "Type A's" suffer from many more kinds of stress symptoms and get sick much more often than "Type B's" do.

"Type B" or "Type AB" behaviour is good, because it allows us to achieve goals, to be motivated and productive, and to do all the things "Type A's" can do without being hostile, aggressive, impatient, or insecure. Achieving everything we want while still maintaining our composure and being able to relax is something we all can learn to do. By modifying our "Type A" behaviour patterns and conditioning ourselves to adopt more "Type B" character traits, we will become sick less often and make our lives more enjoyable and stress free.

Modifying "Type A" character traits

We develop either "Type A" or "Type B" behaviour as a result of our upbringing, our environment, and sometimes our genetic makeup. Therefore, modifying "Type A" behaviour patterns in order to develop more "Type B" behaviour patterns is not achieved overnight. But once we begin the process of adopting more "Type B" traits, it becomes easier and easier to conform because our brain will be trained to look at stressful situations in a completely different way.

The key to modifying "Type A" behaviour to break some of the long-term stress habits we have acquired. We do this by actively and consistently changing our negative habits and developing new positive habits. Many of us have "Type A" traits not because we are born with them, but because we have repeated "Type A" behaviour patterns so often they have become and unnatural part of our personality. In essence, we have picked up some bad "Type A" habits. By actually practising "Type B" behaviour, we gradually condition ourselves to eliminate some of our worst and most obvious "Type A" behaviour traits.

A Re-programming formula to change your negative habits

EXERCISE: Identify two negative habits that you want to change and describe the positive habits that you want to replace them with. By when do you want to achieve this?

....
....
....
....

Dealing with Potential Stress: A Day in the Life of Joe and Roscoe

The contrast between Joe's and Roscoe's coping behaviour, and the effects of their different response patterns, is apparent in the course of a day.

Potential Stress	Joe (Chronic Stress Patterns)	Roscoe (Healthy Stress Pattern)
Oversleeps - awakes at 7:30 instead of 6:30	Action : Gulps coffee, skips breakfast, cuts himself shaving, tears button off shirt getting dressed.	Action : Phones office to let them kno he will be late. Eats a good breakfast.
	Thoughts: I can't be late again! The boss will be furious! I just know this is going to ruin my whole day.	Thoughts : No problem, I must have needed the extra sleep.
	Result : Leaves home anxious, worried and hungry.	Result : Leaves home calm and relaxed.
Stuck behind slow driver	Action: Flashes lights, honks, grits teeth, curses, bangs on dashboard with fist. Finally passes on blind curve and nearly collides with oncoming car.	Action : Uses time to do relaxation exercises and to listen to his favourite radio station.
	Thought : What an idiot! Slow drivers should be put in jail! No consideration of others!	Thought : Here's a gift of time - how can I use it?
Staff meeting	Action : Sits back, ignores speakers, and surreptitiously tries to work on monthly report.	Action : Listens carefully, and participates actively.
	Thoughts . What a waste of time. Who cares what's going on in all those other departments? I have more than I can handle keeping up with my own work.	Thoughts: It's really good to hear my co-workers' points of view. I can do m work a lot more effectively if I understand the big picture of what we're all trying to do.
	Results : Misses important input relating to his department. Is later reprimanded by superior.	Results: His supervisor compliments him on his suggestions.
Noon-behind on desk-work	Action: Skips lunch. Has coffee at desk. Spills coffee over important papers.	Action: Eats light lunch and goes for short walk in park.
	Thoughts . That's the last straw! Now I'll have to have this whole report typed over. I'll have to stay and work late.	Thoughts: I'll be in better shape for a good afternoon with a little exercise an some time out of the office.
Evening	Action: Arrives home 9 p.m. Family resentful. Ends up sleeping on couch. Does not fall asleep until long into the morning.	Action : Arrives home at usual time. Quiet evening with family. To bed by 11 p.m. falls asleep easily.
	Thoughts: What a life! If only I could run away and start over! It's just not worth it. I'll never amount to anything.	Thoughts : A good day! I felt really effective at work, and it was nice reading to the kids tonight.
	Results : Wakes up late again, feeling awful. Decides to call in sick.	Results : Wakes up early, feeling good.

Stress Reduction
and
Coping Skills

"Now, now, Mr Carter.
that's not how we cope with stress, is it?

THE VALUE OF BREATHING

Why do we breathe?

_____

_____

_____

_____

_____

_____

Research to prove this:

Dr. Jack Shields   -   made a study of the immune system and found that deep diaphragmatic breathing and exercise accelerates the process of eliminating toxins from the body as much as fifteen times.

Dr. Otto Warburg   -   found that the lack of oxygen in cells plays a causing cells to become cancerous.
(Nobel Prize Laureate)   "The prime cause of cancer is the replacement of the normal oxygen respiration of body cells by an anaerobic cell respiration."

Dr. Paris Kidd   -   "Oxygen plays a pivotal role in the proper functioning of the immune system, ie. resistance to disease, bacteria and viruses."

Dr. Steven Levine   -   "We can look at oxygen deficiency as the single greatest cause of all disease."

Learning to Breathe Correctly

·STEP 1   :   How am I breathing?
              Is your breathing predominantly from your chest or your
              abdomen?

STEP 2   :   Shifting from chest to abdominal breathing.
              Take a deep breath in and breathe it out completely (through
              your mouth) as if you were breathing a sigh of relief.
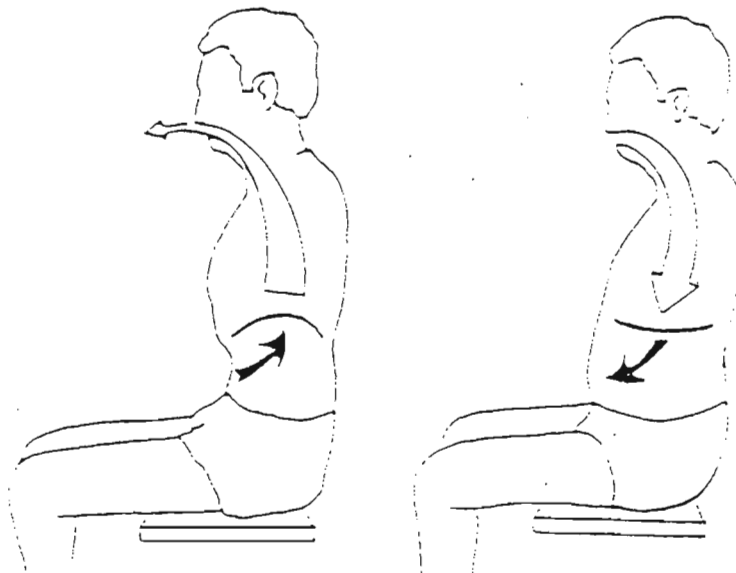
A. EXHALE   B. INHALE
Diachragm relaxes, pushing air out.   Diachragm contracts, pulling air in.
Belly in)   Belly out)

Figure 3. Abdominal Breathing

BREATHING EXERCISES

_____

_____

_____

_____

_____

BREATHING AND STRETCHING EXERCISES

EXERCISE 1: THE BACK RELAXER

A. INHALE   B. EXHALE

Move to the edge of your chair. With eyes closed s. that you can pay closer attention to inner sensations notice how your back feels. On the next in breath, a backward (A), stretching your spine only as far as fe comfortable. Exhale and round your back (B), rollir your shoulders forward and letting go. Repeat three times, keeping full attention on breathing, stretching and letting go (long pause).

EXERCISE 2: SHOULDER SHRUGS

A. INHALE   B. CONTINUE TO INHALE   C. EXHALE
Shoulders up   Pull shoulder blades together   Shoulders down

Inhale and pull your shoulders up to your ears (A). No rotate your shoulders backward, pulling the shoulder blades together (B). Exhale with a sign and let go (C Repeat three times (long pause). Notice that when yo pull your shoulder blades together, you are giving the chest muscles a nice stretch.

EXERCISE 3: FACE EXERCISES
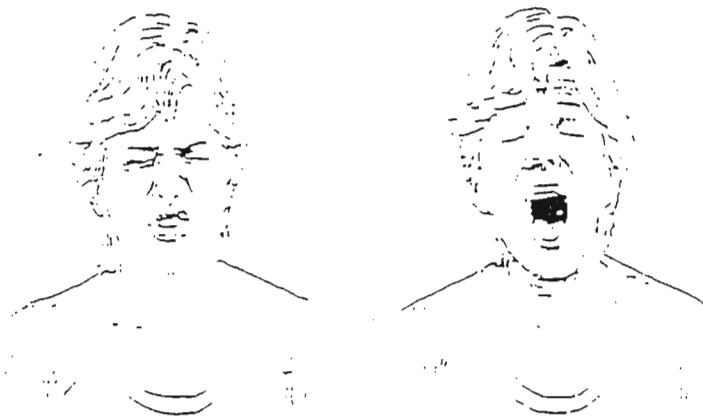
A. THE SCRUNCH   B. THE YAWN
Inhale. Hold. Then exhale and let go   Inhale. Hold. Then exhale and let go

The facial exercises are done in two steps. First inhale and scrunch all your facial muscles in toward the centr (A). It's as if you are trying to squeeze all the tension right off the tip of your nose. Exhale and let it go. Nov inhale and open your mouth wide, lifting your eyebrow to make your face very long (B). This is like a yawn. When you exhale and let go, you may even find yourse yawning.

Stress Stretches

Here is a series of stretches you can do while sitting. They are good if you work in an office You can relieve tension and energize parts of your body that have become stiff from sitting.

With your fingers interlaced behind your head, keep elbows straight out to side with your upper body in a good, aligned position. Now think of pulling your shoulder blades together to create a feeling of tension through upper back and shoulder blades. Hold feeling of releasing tension for 3 to 10 seconds, then relax. Do several times. This is good to do when shoulders and upper back are tense or tight.
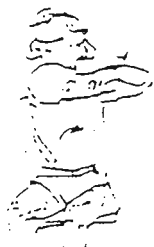
Hold your right elbow with your left hand, then gently pull elbow behind head until an easy tension-stretch is felt in shoulder or back of upper arm (*triceps*). Hold for an easy 30 seconds. Do not over stretch.

Interlace your fingers, then straighten your arms out in front of you with palms facing out. Feel the stretch in arms and through upper part of back (shoulder blades). Hold stretch for 20 seconds. Do at least twice.

A stretch for the forearm: with the palm of your hand flat, thumb to the outside and fingers pointed backward, slowly lean arm back to stretch your forearm. Be sure to keep palms flat. Hold for 35 to 40 seconds. Do both sides. You can stretch both forearms at the same time if you wish.

Interlace fingers, then turn your palms upward above your head as you straighten your arms. Think of elongating your arms as you feel a stretch through your arms and upper sides of rib cage. Hold only a stretch that feels good. Do three times. Hold for 10 seconds.

Hold your right arm just above the elbow with your left hand. Now gently pull your elbow toward your left shoulder as you look over your right shoulder. Hold stretch for 10 seconds. Do both sides.

With arms extended overhead, hold on to the outside of your left hand with right hand and pull your left arm to the side. Keep arms as straight as comfortably possible. This will stretch the arm and side of body and shoulder. Hold for 15 seconds. Do both sides.
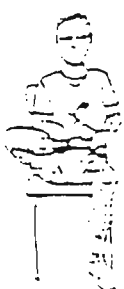
Rotate your ankles while sitting, clockwise and then counterclockwise. Do one ankle at a time, 20 to 30 revolutions.

The Breathing Meditation

Try to keep your back straight and your shoulders relaxed, let your hands rest in your lap, folded or open, whatever way suits you. Become aware of your face - loosen the jaw and mouth, and let the eyes become softer too - especially the tiny little muscles around the eyes. Now, you are ready to begin the meditation on the breathing.

First of all become aware of sounds from outside, listen to different sounds coming from outside - small sounds, bigger sounds, sounds coming and going, then gradually become aware now of the sound of your breathing.

Begin to tune in to the sound of your breathing - if you can hear that sound, if not, then simply focus on the sensation of your breathing. Feel how your body grows bigger on the inhale and smaller on the exhale - a feeling that your body is growing bigger on the inhale and that it gets smaller on the exhale.

A feeling of expansion on the inhale and contraction on the exhale. Should your mind wonder, then gently bring it back again to the focus - the breathing - and the feeling of expansion on the inhale and contraction on the exhale.

You don't need to change your breathing, this is not a breathing exercise - it is an awareness exercise using breathing as the focus.

There is also a feeling of lightness o the inhale as if your body becomes lighter and on the exhale there is a letting go of tension, and worry and heaviness. Feel how your body becomes lighter on the inhale also taking in light with the inhale. And how on the exhale there is a letting go of tension and worry and heaviness.

Becoming lighter and taking in light on the inhale - letting go on the exhale of anything you don't need and more release it with the exhale. Notice how your breathing has become more quiet and softer now.

Another way to feel the breathing is through a picture in your mind's eye - picture a wave in the ocean in your mind's eye - see this wave building up and breaking at the shore. Let your breathing follow that wave - building up and breaking at the shore. Allow your breathing to become that wave, stay with the breathing a little bit longer even if you may get restless or bored or impatient. Stay with the breathing a little bit longer.

Now direct your attention away from your breathing back into the external sounds, again. Stretch your ears and listen to different sounds from outside - forget about the breathing now and become open to the external sounds - close sounds, far away sounds, sounds coming and going. In between the sounds of silence. Then begin to focus on the room you are sitting in - first of all become aware of the floor and your contact with the floor, feel it and feel how there is something solid beneath you something is holding and supporting you. Then, focus on the walls around you and the ceiling somewhere above your head. Also become aware of the atmosphere in the room you are sitting. And finally, yourself sitting here, quietly with your eyes closed.

Diet - Eat yourself healthy

Eating correctly and maintaining ones ideal weight will help one feel good about oneself at all times, as well as give one the strength and the energy that one needs to deal with the demands of the day.

A balanced diet accompanied by regular exercise will help you achieve all that you want to and help you cope more effectively with life.

Today, eating has become a lot more complicated. It seems as though a new danger is discovered everyday: sodium, cholesterol and fat. To cut through the confusion, here are some simple rules of eating right. This basic overview should clue you in to whether your diet is the kind that will keep you energised and feeling great.

Cut down on fat

High-fat diets have been linked to a wide variety of diseases: heart disease, stroke, cancer and diabetes. to name a few. But many men are confused about dietary fat because it comes in three different forms.

> *Here's a quick breakdown on each type and its relative merits:*
>
> | | | |
> |---|---|---|
> | Saturated fat: | ☐ Good | ☒ Bad |
> | Poly-unsaturated fat: | ☐ Good | ☒ Bad |
> | Mono-unsaturated fat: | ☐ Good | ☒ Bad |

Okay. if you want to get into fine points. it's true that some of these fats do some good. (Mono-unsaturated fats. found in canola and olive oil, raise the good kind of cholesterol). But as a simple overriding principle, you get more benefit from limiting fats of all kinds. Most dietitians recommend a diet that's no more than 30 percent fat. Most people eat about 40 percent of their total kilojoules in fat. Saturated fats which come primarily from animal sources like beef, veal, egg yolks and pork and from dairy products like butter and cheese - are the worst type; try to get 10 percent or less of your total daily kilojoules from them.

Besides the long-term health benefits you'll receive from lowering your fat intake, you'll also notice something visible starting to happen: you may begin losing weight. That's because the body burns fat more slowly than it does carbohydrates - the type of kilojoules you get from grains, pasta. fruits and vegetables. Cut down on the fat you put in your belly to cut down on the fat you put on it.
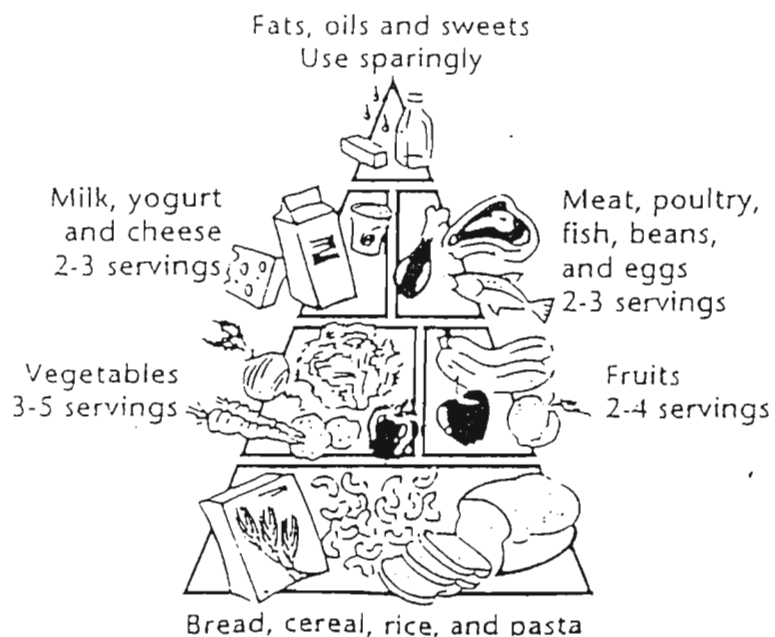
Here are some quick tips on cutting your fat intake:

♦ Watch the add-on fat. Pasta, bread and vegetables are naturally low in fat, but not when they're drenched in butter or sour cream. Look for better toppings, such as salsa, lemon juice, or fat-free cottage cheese.

♦ Cut down on meats, especially red meats. Skinless chicken and fish are lower-fat alternatives.

♦ Try switching from whole-milk dairy products to low-fat or non-fat versions. If you drink whole milk now, switch to two percent, then work your way down to non-fat skim milk.

♦ Adopt healthier cooking methods. Stir-frying with olive oil, steaming, baking, grilling and microwaving are all better than frying, during which the food absorbs oil (liquid fat).

♦ Read the label. Look at the total number of kilojoules in a serving of your favourite food. Look at the grams of fat. Multiply the grams of fat by 36 kilojoules - that's how much each gram contains. If your new number is more than 30 percent of the total kilojoules, this is a food you want to cut down on.

Meet your vitamin needs

Look at the side panel of any cereal box and you'll see something called your daily value. It's the recommended amount of each nutrient you should eat to keep your body functioning in good health.

Eating a variety of foods is the best strategy for meeting your vitamin requirements. Consider that melon is a good source of vitamin A, spinach is a good source of folate, and peas are a good source of potassium. See the Food Guide Pyramid below to help make your dinning decisions easier. The foods lowest on the pyramid are your best bets for healthy eating. But even those categories have options that are smarter choices than others in terms of fat and kilojoules as well as fibre and other vital nutrients

The Food Pyramid

Fats, oils and sweets
Use sparingly

Milk, yogurt
and cheese
2-3 servings

Meat, poultry,
fish, beans,
and eggs
2-3 servings

Vegetables
3-5 servings

Fruits
2-4 servings

Bread, cereal, rice, and pasta

Here are some examples of what makes one serving:

Here are some examples of what makes one serving:

Bread group: 1 slice bread; 30g ready-to-eat cereal; ½ cup cooked cereal, rice, or pasta.

Vegetable group: 1 cup raw leafy vegetables; ½ cup other vegetables; ½ cup juice

Fruit group: 1 apple, banana or orange; ½ cup chopped fruit; ½ cup juice.

Milk group: 1 cup milk or yoghurt; 30-40g of natural cheese.

Meat group: 60 - 85g (about the size of a pack of cards) cooked lean meat, fish or poultry (note that ½ cup cooked dried beans, 1 egg, or 2 tablespoons peanut butter is equivalent to 30g meat).

While it's best to get your nutrients from foods, most men's diets don't cover the daily value for all vitamins. It's here that vitamin supplements can help make up the difference. A basic daily supplement should give you 100 percent of the recommended allowance for the following nutrients: beta-carotene (or vitamin)A); the B vitamins; and vitamins C, D, E and K. In addition, it should also contain 100 percent recommended levels for potassium, magnesium, selenium, zinc and chromium, all of which are needed for a man's good health.

Vitamin and Mineral Supplements may be necessary for those:

■ **on certain medications:**
such as those which interfere with normal absorption of vitamins. Certain antibiotics, oral contraceptives, tranquilisers. painkillers, asthma medication, diuretics can all affect your vitamin requirements. So if you are taking these on a prolonged basis, check with your doctor.

■ **on stringent or inadequate diets:**
it is difficult for your body to get sufficient nutrients if your kilojoule intake is too low

■ **who are elderly:**
older people with diminished appetites may easily become malnourished.

■ **who smoke:**
they appear to use up vitamin C at a faster rate than non-smokers.

■ **who are strict vegetarians:**
those who avoid milk and eggs are at serious risk of B12 and other vitamin deficiencies.

■ **who are heavy drinkers:**
this often depletes B and C vitamins.

Get more fibre

In our grandparent's day, fibre was called roughage. Since it's hard to sell, say, breakfast cereal with big banners that say 'high in roughage', today we use the more marketable, less graphic term fibre. There's soluble fibre (psyllium and oat bran) and insoluble fibre (fruit and vegetable fibre and wheat bran), each of which has various sources and a number of health benefits.

Yes, we know: say 'fibre' and you think of some old guy on television talking about 'regularity'. So we've got a solution. Don't think about it. Instead, make a habit of following some of the suggestions we've listed here. They'll help you eat the fibre you need without making chow time a chore.

> **Play the skins game**
> As with may vegetables and fruits, the peel of the potato is a fibre gold mine. When you pop one into the microwave, think 'jacket required'.

> **Grasp a strawberries**
> Strawberries, raspberries, blueberries, blackberries and other fruits pack plenty of what you need. Keep them in the fridge and toss a handful on pancakes, waffles, french toast, yoghurt, or ice cream.

> **Don't drain your beans**
> To get the most fibre from canned beans, don't drain the broth the beans come swimming in. It has fibre. Another tip: when you crack open a can of soup, spill half a can of black or kidney beans into the pot, too.

> **Turnover a new leaf**
> To firm up a salad's fibre foundation, toss out your usual leaf, and substitute spinach. It has up to three times more fibre than your typical iceberg lettuce.

> **Sauce up your pasta sauce**
> Keep a bag of mixed frozen vegetables in your freezer. When you heat up the sauce, simply dump in some of the vegetables and let them defrost.

> **Give up cereal monogamy**
> To make your morning appointment with Tony the Tiger more productive, top a bowl of the sweet stuff with a scoop of a whole-grain cereal. Gradually reduce the amount of sweet cereal each day and substitute more of the whole grain.

> **Brownnose**
> Next time you're lunching at your favourite Chinese Restaurant, ask the waiter to substitute brown rice for white. Your fortune cookie's note should read: 'You will increase your fibre by more than 200 percent.'

> **Add water**
> You should drink at least eight glasses of water a day when adding fibre to you diet.

Don't diet

Here's what happens when you go on a diet: your body senses danger. Little primitive survival mechanisms, left over from the days when we scrounged for grubs on the high plains, start sending out messages that say, 'Conserve fat. Burn fewer kilojoules'. Your metabolism slows down. Now. is this your dieting goal? Of course not.

How. then do you lose weight? By eating more of the foods that keep your metabolism revving - the same carbohydrate-rich vegetables, fruits grains and legumes that will also deliver fibre and vitamins. And by supplementing your healthy eating with an exercise regimen. Trying to lose weight - and keep it off - without regular exercise is a no-win proposition.

Vitamins

Good food sources

vitamin A	dark green and orange-yellow vegetables, milk, liver
Vitamin B_1	oatmeal, whole wheat, dried yeast, pork, legumes, peanuts, milk and milk products
vitamin B_2	milk and milk products, organ meats, pork, bran flakes, leafy green vegetables
vitamin B_6	wholegrain cereals, meat, legumes, beer, cabbage, avocado, eggs
vitamin B_{12}	liver, oysters, tuna, leg of lamb, milk, eggs
vitamin C	citrus fruit, strawberries, tomatoes, peppers, green leafy vegetables, cauliflower
vitamin D	fish-liver oil, fortified milk, egg yolks
vitamin E	eggs, vegetable oils, wholegrain cereals
vitamin K (menadione)	leafy green vegetables, liver, dairy products
folic acid	raw spinach, cooked beetroot, apricots, oranges, fish, liver, poultry, legumes, avocados
biotin	milk and milk products, oatmeal, soya beans, beef liver, eggs, chicken, bananas, peanuts, beans, avocado
niacin	eggs, avocados, meat, poultry, fish, prunes
pantothenic acid	yeast, eggs, salmon, pork, milk, avocados, bananas, molasses

Mineral Munchies

Minerals are just as important as vitamins. They're essential to good health and inadequate levels in the body can lead to deficiency diseases - the most common being anaemia from lack of iron. Here are some food sources that supply various minerals:

calcium	milk products, seafood (sardines and oysters), leafy green vegies - spinach, lentils, beans, dried figs, tofu
chlorine	fish, salt
chromium	brewer's yeast, wholegrain cereals
cobalt	liver, clams, meat
copper	oysters, lobsters, pecans, walnuts, bananas bran
fluoride	seaweed, seafood, tea, flouridated water
iodine	iodised salt, seafood, seaweed
iron	Liver, red meat, poultry, egg yolks, raisins, leafy greens
magnesium*	wholegrains, green vegies, seafood, bananas, apricots, nuts
manganese	spinach, broccoli, peas, tea, raisins
molybdenum	organ meats, wholegrains, legumes
phosphorus	meat, tuna, poultry, soya beans, eggs, peas, potatoes
potassium	bananas, milk, oranges, tomatoes, potatoes, broccoli
selenium	seafood, wheatgerm, milk, meat, egg yolks
sodium	ham, bacon, sausages, cheese, eggs, canned and processed foods, salty snacks, baking soda
sulphur	eggs, lentils, kidney beans, lean beef
zinc	oysters, liver, meat, bran, wheatgerm, yeast

10 OF NATURE'S SUPERFOODS

Science is showing that some of the simplest foods can act against illness and improve your wellbeing.

Apricots

Best fresh for vitamin C, with plenty of fibre for good digestion and high levels of betacarotene, the anti-ageing pigment that fights cancers and helps prevent heart disease.

Artichokes

Rich in phyto-chemicals, thought to be good for the liver and to help control gallstones and cholesterol levels. In France, capsules of the leaves are taken for liver disorders

Berries

Raspberries, strawberries, blackberries and many more are loaded with vitamin C and anti-oxidant pigments which prevent cells ageing prematurely. Those with dark blue or purple skins are rich sources of anthocyanins, a group of anti-oxidants thought to be beneficial for the skin and blood vessels.

Broccoli

Full of iron, potassium, folic acid and lots of anti-oxidants, including sulphoraphane which can help to fight cancer of the lungs and the digestive system.

Brussels sprouts

A rich source of betacarotene, folic acid, vitamins C and E, potassium and fibre. They also contain sulphoraphane which can stimulate anti-cancer enzymes.

Cabbage

New research suggests that cabbage contains substances that help break down oestrogen, so it could help guard against womb and breast cancers. It also contains a chemical which can offer relief to those with stomach ulcers; and it's a source of potassium, folic acid, betacarotene and vitamins C, E and K.

Grapes

Contain 20 known anti-oxidants, some of which fight heart disease and cancer. Red and purple grapes are most powerful, but white grapes, purple grape juice, raisins and red wine also offer health benefits.

Mangoes

They are rich in anti-ageing betacarotene, vitamin C, potassium and fibre.

Sweet Potatoes

Are a very good source of betacarotene which may boost the immune system - eat them more often.

Tomatoes

Best source of the anti-oxidant pigment lycopene which may reduce the risk of cancers of the cervix and the pancreas. Tinned tomatoes, tomato juice and sauce count too.

My Eating Habits

Having read the pages on healthy and unhealthy eating, answer the following questions:

Looking at the food pyramid outlined in the manual, what percentage of each level of the pyramid (food type), do you eat on an average day ?

Milk   1

Meat   Nil

Veg   2

Fat   1

Bread   1

Having considered your current eating habits, what changes do you need to make ? Set some specific goals, starting from today !

EXERCISE

What are some of the benefits of exercising?

.... HEALTHY LIFE STYLE ....

.... INCREASE SELF ....

....

....

....

There are 3 important aspects of exercise:

1.   Frequency

The recommended frequency of exercise is a minimum of 3 times per week. These 3 days should not be continuous but scheduled with a day of rest between the days of exercise.

2.   Duration

The amount of time one should exercise each time is 20 - 30 minutes. The time should be continuous rather than 3 x 10 minutes sessions per day.

3.   Intensity

How hard you are working during exercise is a very important factor to consider. The heart rate is an excellent measure of how much stress a person is undergoing during exercise. The heart rate will increase in direct proportion to intensity of exercise.

HOW MUCH EXERCISE DO YOU REALLY NEED?

How much exercise do you really need? And how vigorously do you need to work out? These questions may seem simple, but the answers are not, says James M .Rippe, medical advisor to the International Health, Racquet & Sportsclub Association. .

According to Rippe, a number of well-publicised studies on health and fitness over the past few years have produced results that appear to be contradictory. For instance, the American College of Sports Medicine (ACSM) and the Centers for Disease Control (CDC) recommended that sedentary individuals try to accumulate 30 minutes of moderate physical activity every day. This advice seemed to contradict the recommendation that many fitness professionals had been making for years - exercise 20 to 30 minutes, three times per week, at 70% of your predicted maximum heart rate.

How to achieve your goal:

- If you want to lower your risk of developing a number of chronic diseases, to sleep more deeply. to normalise your cholesterol level, and to improve your sense of well-being. then you need to accumulate 30 minutes of aerobic activity in the course of the day, preferably every day.

- If your goal is just to increase aerobic fitness, then you should aim for a minimum of 20 minutes of cardiovascular exercise, three to four days per week. at 65% to 80% of your predicted maximum heart rate.

- . If your desire is to lose weight, then you need to include 30 to 60 minutes of exercise. five or six days each week, at 60 to 70% of your predicted maximum heart rate. in your workout programme.

The above recommendations relate to continuous moderate activity commonly known as cardiovascular endurance or aerobic exercise. Examples include jogging, cycling, rowing, swimming, "aerobics" and super circuit work.

It is recommended that strength training forms part of every regular exercise programme. Skeletal muscle activity enables us to complete normal daily tasks, but after the age of 30 the average person loses about 250g of muscle per year. And because muscle is the most metabolically active tissue in our bodies, retaining muscle mass is also essential to weight management, the more muscle we have, the more calories we burn.

What's your maximum heart rate?

Rob Cowling says you can predict your maximum heart rate reasonably accurately by subtracting your age from 220. For example, if you are 40 years old, your predicted maximum heart rate would be 180 (220 - 40) To work out at 70% of this. you would be looking at a heart rate of 126.

THE PSYCHOLOGY OF WINNING IN ACTION - DENIS WAITLEY

1. POSITIVE SELF AWARENESS

* See Yourself through Others' Eyes

   Would I like to be:
   - Married to me
   - A partner like me
   - A manager like me
   - An employee like me
   - A child like me

* Evaluate Important Information

   (Read or hear information that impresses you)

   - Check out statements
   - Get input from the experts

* Break your Daily Routine

   - Go to work another way
   - Cut down on television
   - Increase your reading
   - Make new friends
   - Start a new hobby/ project/ community service

* Take a Personal Health Inventory

   - Have an annual physical exam
   - Review parents lifestyle
   - Break harmful patterns
   - Eliminate junk food
   - Eat fruit and vegetables
   - Exercise regularly

2. POSITIVE SELF ESTEEM

*Take Stock of Assets

   ASK:-
   What are my talents, traits
   Whom can I count on
   What are my accomplishments and skills
   What are my goals
   What are my dreams for the future
   What do I want to learn
   Where do I want to go
   Who do I want to be

   REVIEW OFTEN!!!

* Monitor Self Talk

Avoid using negative prison words
Replace these with positive words

I can't	-	I can
I have to	-	I choose to
I'll try	-	I will
If only	-	Next time
Impossible	-	Possible
Why me	-	Try me

* Communicate your Value to Others

Greet people with a smile & handshake
Give your name
Maintain eye contact
Say thank you

3. POSITIVE SELF CONTROL

* Take Control of your Life

List your daily priorities (line up key tasks, most NB at top)
Check the list routinely

* Take Control of your Time

List 5 unpleasant but important tasks ...
Do them this week

* Take Control of your Finances

Make a budget
Begin a savings programme
(treat it like a monthly bill)
Save money frequently

4. POSITIVE SELF IMAGE

* Develop a Game Plan

From life-time goals to daily duties

REVIEW: career, family, finance, education, public service,
mental and physical health

- Set one goal for each area
- Review often

* Visualise Achievement (10 mins a day)

   Imagine how it looks, feels, emotions, etc

* Learn New Skills

   Role models/experts, a coach, etc

* Get Feedback

   Must be constructive, share goals, monitor progress.
   Have a support group, people genuinely interested in your success.

5.   POSITIVE SELF EXPECTANCY

* View Problems as Opportunities

      - List pressing problems (blocking your fulfilment)
      - Describe each problem
      - Rewrite description (But this time challenge your ingenuity by
        describing problems as opportunities)

* Maintain an Upbeat Outlook

      - Wake up to beautiful music (not an alarm clock)
      - Take a brisk walk
      - Eat Nutritious breakfast
      - Use Positive Self Talk (while showering for example)
      - Associate with Winners

* Expect the Best from Others

      Offer praise and encouragement freely and generously
      (so that they can rise to their and your expectations).

STRESSFUL SITUATION ANALYSIS

1. What happened? (When, where, who, what, why?)	Car in front too slow; I was late for a meeting.
2. What did you say to yourself?	Crazy idiot! What does he think he's doing?
3. What was your reaction?	Angry at driver.
4. How did you feel when it was over?	Upset; heart racing; couldn't concentrate on meeting.

Now, fill in the details of your situation.

1. What happened? When, where, who, what, why?	
2. What did you say to yourself?	
3. Consequently, what was your reaction?	
4. How did you feel when it was over?	
5. In future I will say to myself	

Preparing to Meditate

◆ Take the phone off the hook and ensure there will be no interruption. Ask your family to support you in this regard.

◆ Use a comfortable chair/cushion/position.

◆ Have your own 'special place'.

◆ Lower the lights and / or use candles (or try a "warm-coloured" globe). If appropriate play soft soothing music.

◆ Use incense / aromatherapy oils.

◆ Keep pictures, objects, gifts or anything that has a special or symbolic meaning for you.

◆ Wear comfortable clothing.

◆ Always keep an open mind with no expectations, every meditation experience will be different.

IMAGING EXERCISES USED FOR RELAXATION

.There are literally thousands of examples of imaging exercises, each one as
unique as the individual doing it. I'm going to give several examples here with
the idea that you'll take the basic outline, change it if you like, and incorporate
your own "personal image" into it. Although you may want to use one of the
exercises given here, you should be aware of your own personal needs and
desires in order for this stress management tool to work for you. Remember,
it's very important for an image to "fit the individual" and not the other way
around.

Imaging Exercise #1

Select a comfortable position, close your eyes, and begin breathing slowly and
smoothly. With each breath, feel the muscles in your body becoming heavier
and heavier. Imagine the tension melting way as you continue breathing
rhythmically and naturally. Now picture yourself lying on a warm, tropical
beach basking in the glow of an afternoon sun. Visualise the vivid, beautiful
colours of the sky, the earth, the flowers, and the plants around you. As you lie
on the beach, the warmth of the golden sand penetrates every pore of your
body and makes you feel warmer and warmer. The golden sand feels soft and
soothing, its warmth enters your hands and feet and begins to creep throughout
your entire body. Imagine yourself lying serenly and restfully as your muscles
become loose and limp. Feel your body sinking into the sand and drifting
deeper and deeper into a state of peace and total relaxation. With each breath,
watch your body become more and more relaxed, more and more at peace.

Now feel the warmth of the sunlight all over your body, warming you deeply and
gently. Visualize the inside of your body bathed in the golden light, absorbing
every glowing as radiantly as the sun. A warm, gentle breeze swirls around
your body and warms you even more. Visualise and feel the breeze blowing
over every part of your body. "

As you visualise these images, say to yourself: "I feel warm and relaxed" or
"the warmth of the sand is making my muscles feel so loose and relaxed." "I
feel refreshed and relaxed." Slowly open your eyes, take a few deep breaths,
and stretch for a few seconds.

Imaging Exercise #2

Select a comfortable position, close your eyes, and begin a smooth rhythmic
breathing pattern. Continue breathing this way for a few minutes and then
visualize a picturesque lagoon surrounded by tall palm trees and beautiful
flowers. The water is clear, blue turquoise and overhead is a blue cloudless
sky. You hear nothing but the soft whisper of a breeze as it gently passes over
your body and touches your face with its light invisible fingers.

Imagine yourself floating on the calm, gentle water. As you float, the warm water soothes and relaxed your muscles. Feel the water massaging first your feet, then your legs, your arms, and finally the rest of your body. The water becomes warmer and warmer, and as you drift deeper and deeper into a relaxed state, it begins to melt the tension away. Picture yourself absolutely weightless in the water, perfectly at peace and floating gently, smoothly, and slowly. You're one with the water, it surrounds you completely and loosens every muscle in your body. Each time you breathe, the warm, soothing water lifts you slightly; and each time you sink back down, more tension is melted away. Soon, your body is so relaxed in the water that you feel like you're a part of it.

You can do this exercise in a relaxed sitting or lying position or while taking a warm bath. A word of caution when doing this in a bathtub, however. Since this technique will make you feel so relaxed, you may have a tendency to doze off. Make sure your head is propped up to prevent your head from slipping down into the water. A sudden jolt like that can ruin your next attempt at visualizing. Continue the exercise for about twenty minutes and then visualize yourself slowly floating to shore. Gradually get out of the water saying to yourself, "I feel so refreshed and relaxed." Open your eyes, stand up slowly, and stretch for a few seconds.

Meditation - Living in the Moment

I believe meditation is best explained (if not defined) in one simple word: 'being'. When you learn how to live only in the moment, when there is nothing that distracts you, when you are not tied to the past or anxious about the future, when your mind and emotions are your servants rather than your master, your consciousness (your awareness) is in the most perfect state possible. This state is simply 'being'. Meditation is about 'being'; not about 'doing'.

When you learn to live for each moment as it happens, to enjoy and appreciate life to the fullest at that moment, you suddenly become impervious to the myriad of doubts and fears that you've lived with all your life. When you can finally appreciate that just 'being' is everything, that you cannot make life perform exactly as you would like it to, that you cannot control the future, and that there is no point in dwelling on what has passed, you will have achieved something that most people never come close to in a lifetime: you will have peace.

'For the man who has conquered his mind, it is his greatest friend;
but for the man who fails to do so, his mind will be his greatest enemy.'
Sri Krsna

When you have learned how to do one thing (and one thing only) at one time, you will have learned to centre your whole attention, to 'focus'. Meditation will teach you to focus. This unique talent not only produces a wonderfully calm, balanced state of mind, but it also assists you in all aspects of your everyday life. You'll be able to think better, concentrate better, understand better. Your mind will be more creative. You'll function better in every respect.

How 'focussing' can bring about such positive results, one can only speculate. It would seem that the act of doing just one thing totally, frees the mind from unnecessary conflict and distraction to such an extent that mind and body function more perfectly than at any other time. Perhaps (as Eastern mystics have claimed for centuries) this is your natural state; this I how you're really meant to feel and function all the time!

Think how your mind works when you're in a state of anxiety. Your thoughts seem to come faster and faster. They flit from pillar to post every few seconds. They look sadly on the past and worry about the future. And the more you try to slow them down, the more frantic they seem to become. Then, as your attention ebbs and flows in a hundred different directions, your anxiety level increases - one feeds the other until it's crisis time. 'I've really got to finish this work before the end of the day ... where did I leave my pen ... I must slow down ... I made a terrible impression last time ... I've got to relax ... ' You just can't turn your mind off. You can't get to sleep. You ignore your diet. And things continue to get worse.

Imagine how calming it would be if your were unaffected by all that extraneous rubbish and all those unimportant thoughts. Imagine what it would be like if, at will, you could have only one thing on your mind at the one time. Imagine what it would be like to be able to sit down and do just one thing without distraction, without worrying about what you did yesterday or what you have to do tomorrow or what's going on in the next room.

Centering your mind or attention on just one thing is tantamount to having nothing on your mind at all. You see, it is the very nature of thought to be always on the move. Thought depends on constant movement for its very existence; it is a dynamic process. Thoughts are always coming from one place to go to another, you halt this restless process and the mind is no longer preoccupied with unsolicited thoughts, it soon becomes completely stilled. Only consciousness remains. And when you can achieve an absence of thought, you will begin to know what your mind really is; or more importantly, what your self really is.

Meditation influences your state of mind. If your mind is calm, your life will be in order. Your state of mind has a very definite influence on your general state of health. Consider how a relaxed, happy, easy-going person always seems to have fewer medical complaints than his/her counterpart who is neurotic, bitter and anxious. You may argue that the medical complaints could be the cause of the state of mind rather than the other way around; but there has been enough evidence documented in the last ten years which shows that mental state (stress) does have a marked negative effect on organic conditions. Not only does it encourage ill-health and disease, but it inhibits the body's immune responses and the entire healing process.

Meditation not only encourages a powerful health-giving frame of mind, but it is also one of the most successful antidotes to stress known to man. Meditation will reduce accumulated stress. It will have a positive effect on your general state of mind and your general state of health. Use it sincerely and conscientiously and the day will certainly come when you will no longer be a victim of stress.

'Don't meditate; be in meditation.'
Buddha

You can achieve a great measure of calm and well-being in your day-to-day life by making every act of your day an act of meditation. Living this practice means that everything you do is done in such a way that it enriches your life and makes you a happier, more contented, more successful human being.

PSYCHOLOGISTS GUIDE TO SELF-IMAGE

Psychologists and consultant, Hilary Tupling, laughed when asked for tips for both those with high and low self-esteem. "I 've never met anybody with too much self-esteem," she said. Here are her tips on how to bolster your self-regard. Broadly, these very helpful suggestions fall under two headings: ways of appreciating yourself and secondly, ways to release negative feelings. Follow them, and you will be well on your way to a new, more positive self-image that will spill over into and improve many aspects of your life ....

1. It is important to accept the way you are. No-one needs to be or can be perfect. Perfection is not only impossible but boring. You don't have to work hard to prove you are OK. Just relax about yourself.

2. Stop criticising yourself. Be aware of niggling, negative thoughts creeping in, those destructive refrains like "What a fool I am" or "Only someone as stupid as me could have done that". Become aware of these nasty jingles ringing in your head and stop them. The method is very simple. Just tell that critical voice chattering away inside your head to Shut Up!

3. Don't compare yourself unfavourably with other people - a very common trap. You can't be someone else. Destructive criticism of this nature cannot do any good. It is negative and defeatist - no help in making you feel better.

4. Allow yourself to accept praise and compliments fully. Don't meekly dismiss the good things people say about you by thinking, "Oh but she didn't really mean it". People are often much quicker to criticise than praise and most praise is usually sincerely meant. Think positively and accept it as such.

5. Forgiven yourself past mistakes! Punishing yourself by reliving unpleasant incidents doesn't help or change anything. You can learn from your mistakes but only when you've stopped flagellating and forgiven yourself for them.

6. Say to yourself, "I'm going to be as kind to myself as I want other people to be kind to me." Do unto yourself as you would be done by. This means give to yourself, nourish and cherish yourself, be as gentle with yourself as you would with a child, a friend, or a lover.

7   Search out or take responsibility for creating enriching experience in your life. Don't hang back and wait for other to organise you. Whether it is a film you want to see or a book you've meant to write, do it, and feel good about it.

8. Value your ideas and interests, expand on them. Interested people are interesting. Don't be sensitive to others' approval or disapproval, learn to trust the worth of what you believe and do.

9. Be sensitive to other peoples's needs without taking responsibility for them. Hear other's point of view, be sympathetic but don't make yourself responsible for their emotions like anger or sadness.

10. And, finally, accept the variety, range and depth of feelings you experience. When you're angry, be angry. Don't tie yourself in knots by listening to that pious voice of conscience which says you should be that or do that. You are a very complex person and you can't always be a serene and happy angel.

THE HARDY PERSONALITY

The term 'hardy personality' was coined by Kobasa (1982), who has researched psychological factors increasing resistance to stress extensively. In shedding light on the characteristics of the person who does not react to stress with illness, she has simultaneously identified characteristics related to coping with stress. These factors are:

- commitment
- control
- challenge

COMMITMENT

Commitment is the ability to believe in the truth, importance and interest value of who one is and what one is doing, and thereby the tendency to fully involve oneself in the many situations of life, including work, family, interpersonal relationships and social institutions'. The commitment is to self as well as to others.

Although commitments will tend to change during the course of life, the continuity in commitment to others (including love), to mastery (including work) and to moral, religious, generative, and altruistic values is essential to a sense of continuity of self.

CONTROL

Control - Kobasa defines this as 'the tendency to believe and act as one can influence the course of events'. In other words, the individual accepts responsibility for doing something about the stress-inducing situation.

He does not respond with helplessness and a fatalistic attitude.

CHALLENGE

Some people are able to see a challenge in a situation which to others would be a major threat or disaster. Thomas Edison, the famous inventor, is a striking example of this. Edison became very deaf during the course of his life, which could surely have been considered a serious handicap to someone concerned with the reproduction of sound by means of a new invention, the gramophone. However, Edison saw it differently. He is an outstanding example of someone who could turn a threat or problem into an advantage. 'Deafness, pure and simple, was responsible for the experimentation which perfected the machine. It took me twenty years to make a perfect record of piano music because it is full of overtones. I now can do it - just because I am deaf'.

According to Kobasa, a person who perceives a stressful situation as a challenge is reflecting the belief that change rather than stability is the norm of life. People who view life and its stresses in terms of challenge tend to be open-minded and flexible in their thinking. They also tend to identify resources and support systems which can be enlisted to help them to cope with their stress and they are willing to accept help, if necessary.

TENSION-LEVEL TEST

Please make a tick in the space to the left of each statement.

Often	A few times a week	Rarely	
			1. Once I find the time, it is hard for me to relax.
			2. I have a difficult time finding enough time to relax.
			3. I take tranquillizers (or other drugs) to relax.
			4. I find it difficult to concentrate on what I'm doing because of worrying about other things.
			5. I can't turn off my thoughts away from work enough to feel relaxed and refreshed the next day.
			6. I have tension/migraine headaches, or neck/shoulder pain, or insomnia.
			7. I eat/drink/smoke in response to tension.
			8. People at work/home arouse my tension.
			9. I feel tense, anxious, or have nervous indigestion.
			TOTAL SCORE

SCORING

OFTEN	=	2 points
A FEW TIMES A WEEK	=	1 points
RARELY	=	0

TOTAL SCORE	TENSION LEVEL
14 - 18	DANGEROUS
10 - 13	SOME RISK
6 - 9	AVERAGE
3 - 5	BELOW AVERAGE
0 - 2	CLEAR - SAILING - KEEP IT UP!

TOTAL SCORE

0 - 5 = LOW   6 - 12 = MEDIUM   13 - 18 = HIGH

HOW BALANCED IS YOUR LIFE?

On this grid there are 24 different items. You will notice the numbers across the top of page range from 10 points to 100 points. Reading each of the 24 separate items, ask yourself the question, "How true is this of me?" - in other words, taking the first item, "have a variety of close friends," is this 10 percent true of you, 20, 30, 60, 80, or 100 per cent true of you? Rate yourself on each item, circling the dot under the percentage point at which you see yourself. It should only take you about 8 to 10 minutes to complete this grid.

		10	20	30	40	50	60	70	80	90	100
1.	Have a variety of close friends	.	.	.	.	.	.	.	.	.	.
2.	Spend time alone thinking, meditating or praying often	.	.	.	.	.	.	.	.	.	.
3.	Exercise vigorously each day	.	.	.	.	.	.	.	.	.	.
4.	Have adequate quality and quantity time spent with family	.	.	.	.	.	.	.	.	.	.
5	Have a job that pays well	.	.	.	.	.	.	.	.	.	.
6	Am already engaged in career I want	.	.	.	.	.	.	.	.	.	.
7	Am involved in community activities	.	.	.	.	.	.	.	.	.	.
8.	Enjoy reading nonfictional books	.	.	.	.	.	.	.	.	.	.
9.	Can make friends easily	.	.	.	.	.	.	.	.	.	.
10.	Regularly focus on my spiritual growth	.	.	.	.	.	.	.	.	.	.
11.	Eat nutritious, well balanced meals	.	.	.	.	.	.	.	.	.	.

		10	20	30	40	50	60	70	80	90	100
12.	Regularly write or call members of the family								⊙		
13.	Am creating an adequate retirement fund								⊙		
14.	Am currently working on advancing in my career								⊙		
15.	Belong to local association (s) within the community										
16	Enjoy educational TV programmes/books/courses										
17	Enjoy meeting new people and going to parties or group events										
18.	Attend church, synagogue or religious services										
19	Am involved in sports regularly										
20.	Enjoy family reunions/ gatherings										
21	Have a substantial savings account										
22.	Am really good at and enjoy my work										
23.	Have volunteered for a community project										
24	Like to go to museums, fairs, libraries to see what's new.										

SHRINKING YOUR WORRIES

Read this list and circle each item you find valuable for you. Place this sheet in a conspicuous spot to remind you of these new actions or attitudes.

ACTIONS TO TAKE

- TALK IT OUT

  Share it with someone else.
  Others will welcome your trust.

- WRITE IT OUT

  Put it on paper. it's easier
  to see it in perspective.

- SHRUG IT OFF

  Raise your shoulders then drop them.
  Relax you whole body

- SORT IT OUT

  List practical options. Weigh it up, decide then ACT

- DELAY IT

  Fix a 15 minute worry session and put it aside until then

- WORK IT OFF

  Do something physical. Clear your head. Divert your energy

- REVERSE IT

  Consider taking an opposite approach.
  Explore alternative angles.

ATTITUDES TO ADOPT

- LAUGH IT OFF

  Lighten it with humour. Be generous.

- DISTANCE IT

  Imagine a few years from now. How much will it matter then?

- BALANCE IT

  Consider the good consequences and feel glad about them.

- CANCEL IT

  Think positive thoughts. Don't let the negative pull you down.

- EXAGGERATE IT

  Picture the worst that can REALLY happen. How likely is it?

- WIN THROUGH IT

  Imagine yourself being successful and feel good about it.

- ESCAPE IT

  Notice something enjoyable around you. Get into the present.

ACTIONS TO AVOID

*STIMULATING YOUR NERVES

Cut down on coffee, tea, cola drinks, sugar
and chocolate.

* RUSHING YOUR DAY

Get up 1 minutes earlier and start the day
calmly.

*HOLDING YOUR WORRIES INSIDE

Talk them out with a friend, or put them
down on paper.

* BURDENING YOURSELF

Avoid negative people and places   Stress is
infectious

* FOGGING YOUR BRAIN

Cut out smoking, excessive eating, alcohol.

*LYING AWAKE AT NIGHT

Try a glass of warm milk.
Have about 7-8 hours sleep.

* OVERLOADING YOURSELF

Lessen the unnecessary in your life
(saying 'NO' can help)

*SCATTERING YOUR ENERGIES

Concentrate on the possible, doing one
thing at a time

* BEING ABSENT-MINDED

Try to be HERE NOW, live in the
present, enjoy each moment.

* BECOMING TOO UNAWARE

Surround yourself with joyful colours,
sounds and smells.

CARRYING UNNECESSARY TENSION

Learn to relax your body and mind at will.

ATTITUDES TO AVOID

*FEELING LIKE "A DOORMAT"

Believe in and know YOUR rights and let others
know them, as well as your needs.

* FALLING INTO THE ROLE OF
WORKAHOLIC

Balance work, rest and play. Take up
a hobby or sport.

* LETTING NEGATIVE TAKE-OVER

Positive thoughts absorb anxiety.
Smiling releases tension.

* PUNISHING YOURSELF

Be as fair to yourself as you are to
others.

* DISLIKING YOURSELF

Accept yourself as you are. Nobody
has to/can be perfect.

* FIGHTING NEGATIVES (YOUR OWN
AND OTHERS)

Direct energies where they will achieve
positive results. Focus on where you want to go.

* KEEPING UP A FRONT

Be yourself!
Every person is unique and of value.

EFFECTIVE COPING SKILLS

Below are a range of options available to you, when dealing with stressful situations:

1. **Alter the Stressor**

   Is it possible to change, influence or control the stressor? Can I take action by myself? What are the likely gains and costs for myself and others? Actions could include:

   - Managing my time better
   - Changing a specific situation
   - Pacing myself and my stressors better
   - Changing a physical stressor
   - Making decisions, taking action, choosing new challenges
   - Communicating with someone to alter their behaviour

2. Avoid the Stressor

   Is it best for me to avoid or withdraw from this stressor? What would be the gains and costs? Have all the options been exhausted?

19. Adapt to the Stressor

   If it is not possible to remove or change the stressor, and/or it is necessary to adapt to the stressor, some suggestions are as follows:

   - Manage my "Chatterbox"

     - Change my beliefs
     - Control my inner conversation
     - Take it less seriously
     - Turn the "threat into an opportunity"
     - Be okay no matter what
     - Ask questions, have a solution focus, keeping and open mind

   - Control the Physical Stress Response

     - Breathing methods
     - Muscle relaxation methods
     - Mental methods

   - Take Action

     - Be assertive, set boundaries, learn to say no
     - Use effective listening skills
     - Make decisions and follow up on them

- **Maintain Health Buffers**

  - Exercise
  - Sleep
  - Nutrition
  - Take regular breaks/holidays/fun times

- **Utilise available coping resources**

  - Social support
  - Community Services
  - Your faith/beliefs

- **Stop/avoid maladaptive recreations to distress**

  - Substance abuse
  - Overeating
  - Dumping on/talking it out on others
  - Escapism
  - Spending sprees
  - Blaming others
  - Avoiding, ignoring, denying the situation

50 Ways to reduce STRESS

1. Get a good nights rest.

2. Take a 10 - 30 minute brisk walk.

3. Delegate tasks.

4. Simplify and unclutter your life.

5. Take one day at a time.

6. Separate worries from concerns. *If a situation is a concern, do what you can do and let go of the anxiety. If you can't do anything about a situation, release it.*

7. Live within your budget. *Don't use credit cards for credit purchases.*

8. Exercise.

9. Eat right.

10. Get organised *and manage your time.*

11. Listen to relaxing music.

12. Everyday, find time to be alone.

13. Make friends with happy, positive people.

14. Laugh.

15. Laugh some more!

16. Develop a forgiving attitude. *(Most people are doing the best they can.)*

17. Talk less; listen more.

18. Slow down.

19. Every night before bed. think of one thing you're grateful for that you've never been grateful for before

20. Drink water or fruit juice, *instead of coffee or cooldrinks.*

21. Do not try be perfect and always do everything right.

22. Enjoy lunch with a friend.

23. Take a ten or twenty minute meditation break during lunch time/tea time.

24. Develop a greater variety of sources of satisfaction in your life, family, friends, hobbies, interests.

25. Be assertive, *learn how to make requests and to say 'no'.*

26. **Spend a weekend in nature.**

27. **Hug often.**

28. **Breathe!**

29. Have half an hour of fun each day (at least!)

30. Plan weekends away and/or little holidays.

31. Be your own best friend.

32. Have a giggle.

33. Hug a tree.

34. Accept others.

35. Have a bubble bath.

36. Watch a sunset.

37. Make love.

38. Have a massage.

39. Go for a long walk on the beach.

40. Get your back tickled.

41. Leave the ratrace to others.

42. Walk, dance, cycle, swim.

43. Smell a flower.

44. Kiss and make up.

45. Be your own person.

46. Watch a cloud.

47. Write a poem.

48. Relax and let go. *Release tension in your toes, feet and legs, then your fingers, arms, shoulders, mentally smooth the muscles of your face. Be aware of your breathing and the relaxing of your muscles.*

49. 'Escape out of your world' *by watching a movie, reading a book.*

50. Do some gardening.

The Stress Response

PHYSICAL REACTIONS

Brain sends biochemical messages that trigger the pituitary and adrenal glands

Increased blood supply to the brain, heart & muscles

Pupils dilate

Moisture is drawn from skin/mouth for use by the brain

Neck, shoulders & back muscles tense - large skeletal muscles contract, ready for action

Heart pumps faster & blood pressure increases A rise in platelets & blood clotting factors occur to prevent haemorrhage in case of injury & to assist in sealing wounds

Liver releases vitamins B & C, sucrose & fatty acids into blood. These are carried to muscles by redistributed blood

Adrenal glands release a cluster of stress hormones

Less blood flow to the skin, kidney & liver. Blood's diverted away from the stomach & digestion slows down. Breathing becomes faster & shallower supplying more oxygen to the muscles

Spleen mobilised to release more red blood cells to carry oxygen

Sweat glands are activated

Muscles at opening of anus & bladder are relaxed
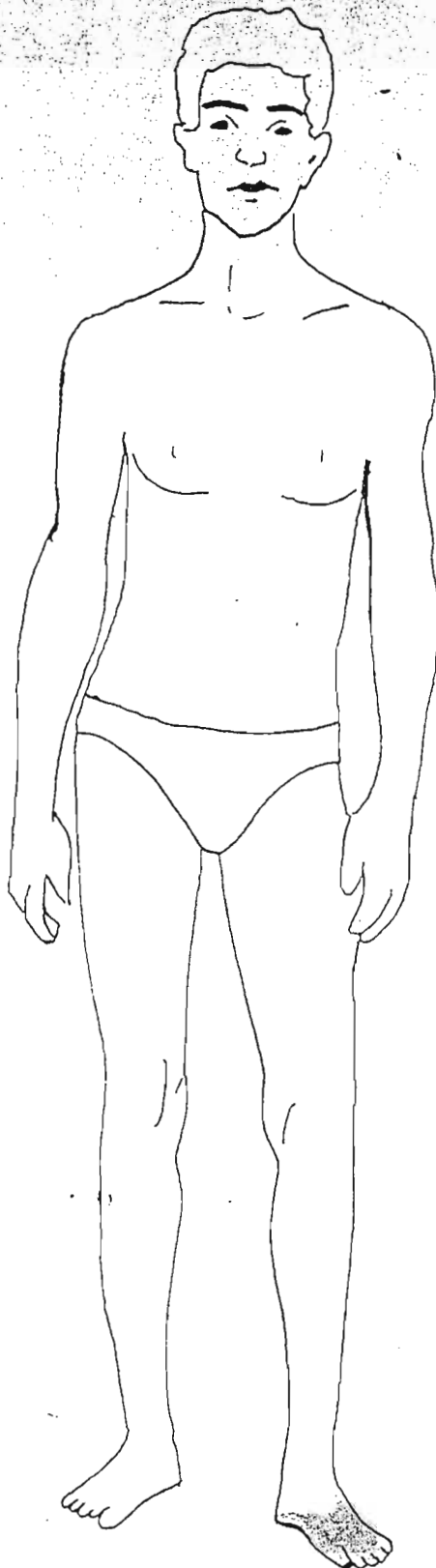
SYMPTOMS

Nervous tics, headaches, migraines, trembles, dizziness

Blurred vision

Mouth goes dry & swallowing is difficult

Aching neck, shoulders & backache

Hypertension, heartburn & heart disease

Excess sugar in the blood & increased acidity leads to indigestion, nausea & ulcers. Knotted feeling in stomach

High blood pressure

Excess sweating

Frequent urination & diarrhoea

Skin goes pale & hands & feet get cooler

SELF ASSESSMENT: PERSONAL SYMPTOMS OF STRESS

Stress symptoms can be divided broadly into three categories: physical emotional and behavioural. Many of the symptoms listed below start out as minor irritants, but become progressively worse and many lead to serious stress-related diseases.

There are many symptoms which tell us we're having a reaction to stress. This list presents some signs of stress build-up. They often occur, and continue, long after the initial stressor has passed. Note, too, that these reactions may occur because of too little stress, or too little challenge. Read each item on the list, and indicate the frequency with which you experience that symptom, using the following scale:

0 - never   1 - occasionally   2 - frequently   3 - constantly/ or almost

I notice these *physical signs*:

0 1 2 3	tension headaches/migraines
0 1 2 3	fatigue/continual tiredness
0 1 2 3	changes in sleep patterns (excessive sleeping/insomnia)
0 1 2 3	bowel problems/ irritations (constipation/diarrhea)
0 1 2 3	lower back pain/backache
0 1 2 3	allergy problems (increased occurrences) hives/ rashes
0 1 2 3	excessive perspiration
0 1 2 3	menstrual distress
0 1 2 3	speech difficulties - eg. stuttering
0 1 2 3	tension/sore muscles/trembling/heaviness of limbs
0 1 2 3	twitches - eyelids, nose, trembling &/ nervous tics
0 1 2 3	change in appetite - loss of/constant - weight loss/gain
0 1 2 3	indigestion/heartburn
0 1 2 3	heart palpitations
0 1 2 3	facial or jaw pains
0 1 2 3	difficulty in swallowing - dry mouth/throat

(0) 1 2 3   stomach discomfort & pain

(0) 1 2 3   frequent urination

(0) 1 2 3   accident proneness

(0) 1 2 3   lowered resistance - susceptibility to illness - eg colds/flu

(0) 1 2 3   ulcers on tongue

(0) 1 2 3   chest pains

(0) 1 2 3   cold hands &/or feet

(0) 1 2 3   high blood pressure

(0) 1 2 3   rapid/difficulty breathing

(0) 1 2 3   dizziness & vertigo

(0) 1 2 3   nausea &/or vomiting

(0) 1 2 3   sexual difficulties

I notice these *emotional signs*:

0 1 2 3   nervousness

0 1 2 3   anxiety

0 1 2 3   irritability

0 1 2 3   depression

0 1 2 3   loss of memory/concentration

0 1 2 3   anger/frustration

0 1 2 3   lack of interest/boredom

0 1 2 3   apathy

0 1 2 3   withdrawal

0 1 2 3   a sense of inadequacy

0 1 2 3   reduced motivation

0 1 2 3   feeling emotionally drained

0 1 2 3   nightmares

0 1 2 3   excessive daydreaming/fantasizing

0 1 2 3   a narrow point of view

0 1 2 3   loss of sense of humour

0 1 2 3   inability to cope

0 1 2 3   feelings of frustration/guilt

(0)	1	2	3	agitation
(0)	1	2	3	inability to make decisions
(0)	1	2	3	feelings of helplessness
(0)	1	2	3	feelings of panic
(0)	1	2	3	lack of sexual interest
(0)	1	2	3	feeling vulnerable
(0)	1	2	3	racing thoughts/disorientation/periods of confusion
0	1	2	3	moodiness/tearful
0	1	2	3	restlessness/over excitability
0	1	2	3	impulsive behaviour
0	1	2	3	thoughts of suicide
0	1	2	3	feelings of rejection/neglect
0	1	2	3	feeling out of control
0	1	2	3	unusual aggressiveness
0	1	2	3	hostility
0	1	2	3	feeling deflated
0	1	2	3	insecurity
0	1	2	3	low self esteem

In my *behaviour* I notice:

0	1	2	3	reduced quality of performance at work
0	1	2	3	missing appointments
0	1	2	3	reduced productivity
0	1	2	3	inappropriate mistrust of associates
0	1	2	3	relationships - quality and quantity - is affected
0	1	2	3	inappropriate hostility/temper outbursts
0	1	2	3	angry/aggressive behaviour
0	1	2	3	unreasonable/over- reactive
0	1	2	3	prejudice/hypercritical
0	1	2	3	prone to minor accidents/increased errors/silly mistakes
0	1	2	3	indecisiveness/difficulty in thinking clearly, concentrating, decision making, starting to do things

0 (1) 2 3   having so much to do and not knowing where to start thus landing up doing nothing

(0) 1 2 3   working later and more obsessively than usual

(0) 1 2 3   sexual/romantic indiscretions

(0) 1 2 3   excessive use of alcohol/tobacco (or increased use)

(0) 1 2 3   loss of interest in self

(0) 1 2 3   loss of interest in others

(0) 1 2 3   compulsive eating/dieting

(0) 1 2 3   gnashing or grinding teeth

(0) 1 2 3   high-pitched nervous laughter

0 1 2 3   negative thinking

0 1 2 3   wrinkling forehead/hair pulling/twirling/nail biting

0 1 2 3   impatience/easily irritated/aggravated

0 1 2 3   hostile/inflexible

0 1 2 3   chronic tardiness

0 1 2 3   sleep disturbances

0 1 2 3   forgetfulness

0 1 2 3   foot/finger tapping/pacing the floor

0 1 2 3   rushed

0 1 2 3   chronic procrastination/lack of creativity

0 1 2 3   polyphasic (doing too many things at once) - jumping from task to task and failing to complete set tasks

0 1 2 3   increased use of prescribed medication

0 1 2 3   sudden change in social habits

Part II

When you review the signs of stress that you recognize as yours, you should begin to get a sense of your personal stress signature. What symptoms do you experience most often? Which do you experience with the greatest intensity? List these in the space provided.

Most often   Most intensely

....

....

....

....

....

Everyone experiences signs of prolonged stress at one time or another. However, if you do notice a persistent pattern in your reactions, or if the intensity of your reactions seems excessive, don't ignore it. Use your awareness as a first step towards managing your stress. Some symptoms are more serious than others, but minor or serious, they are all forms of signalling by the body to the mind that all is not well.

These signals are part of our feedback systems. If they persist it is important that appropriate counter measures are taken before they escalate into more serious, persistent and possibly irreversible symptoms. We must be 'proactive' rather than 'reactive'. Unfortunately we may also have got used to them and 'override' or even 'suppress' the warning messages.

Almost any kind of symptom can be a hidden signal of stress. Learning to recognize the small, insignificant signals can help us become more aware of our own sources of stress.

STRESS DANGER SIGNALS

Stress symptoms can be divided broadly into three categories: physical, emotional and behavioural. Many of the symptoms listed below start out as minor irritants, but become progressively worse and many lead to serious stress-related-diseases.

Physical Symptoms

headaches	twitching eyelid	twitching nose
facial or jaw pains	tension/sore muscles	dry mouth/throat
difficulty in swallowing	ulcers on tongue	dizziness & vertigo
speech difficulties (eg. stuttering)	swollen joints	backache
stomach discomfort & pain	indigestion	nausea &/or vomiting
bowel problems / irritation	chest pains	weight loss/gain
loss of/ constant appetite	heartburn	heart palpitations
trembling, heaviness of limbs	cold hands &/or feet	excess sweating
frequent urination	high blood pressure	increased allergies
rashes/hives/other skin problems	trembling &/or nervous tics	insomnia
continual tiredness	excessive sleeping	sexual inadequacy
accident proneness	rapid/difficult breathing	

lowered resistance - susceptibility to illness eg colds & flu
excessive menstruation or menstrual distress

Emotional Symptoms

irritability	moodiness	depression
agitation	anger/frustration	unusual aggressiveness
loss of memory/concentration	restlessness/over excitability	hostility
nightmares	impulsive behaviour	anxiety
inability to make decisions	nervous over little things	withdrawal
feelings of helplessness	tearful	lack of interest/boredom
feelings of panic	inability to cope	periods of confusion
lack of sexual interest	thoughts of suicide	feeling deflated
feelings of frustration/guilt	feelings of rejection	insecurity
feeling vulnerable	feeling neglected	feelings of inadequacy
racing thoughts/ disorientation	feeling out of control	low self esteem

Behavioural Symptoms

gnashing or grinding teeth	wrinkling forehead	foot/finger tapping
impatience	easily irritated/aggravated	nail biting
high-pitched nervous laughter	hair pulling/twirling	increased smoking
angry/aggressive behaviour	hostile	compulsive
eating/dietingpacing the floor	chronic tardiness	chronic procrastination
increased alcohol consumption	loss of interest in self	loss of interest in others
prone to silly mistakes/accidents	sleep disturbances	inflexible
unreasonable	over-reactive	non-productive
prejudice	lack of creativity	hypercritical
rushed	negative thinking	forgetfulness

Behavioural Symptoms cont.

relationships - quality and quantity - is affected
polyphasic (doing too many things at once)
failing to finish tasks before moving on to the next
difficulty in thinking clearly, concentrating, decision making, starting to do things
having so much to do & not knowing where to start thus ending up doing nothing
jumping from task to task and not completing set tasks
increased use of prescribed medication
sudden change in social habits

If any of these indicators persist you must give this your serious attention rather than ignore
them or treat them as some passing phase.

Some are more serious than others, but minor or serious, they are all forms of signalling by the
body to the mind that all is not well.

Everyone will experience many of these at some time or another. In the short term
most can be ignored. If they persist it becomes dangerous to ignore them since they
are accumulative and are more likely to break out into more serious, persistent and
possibly irreversible symptoms.

Each of us has developed a "pattern" as a result of earlier and later habits which
become in some way "lopsided". At the same time a pattern of signalling is present
in each of us. These have idiosyncratic messages which we need to learn to "read".
(For example: Your migraine may contain the same message as my backache and his heart
flutter).

These signals are part of our feedback systems. If they persist it is important that
appropriate counter measures are taken before they escalate. To be "proactive" rather than
"reactive". Unfortunatley we may also have got used to them and "overide" or even
"suppress" the essential messages. What may be healthy as a short term contingency
becomes unhealthy as long term strategy.

The reason we don't recognize minor stress symptoms is that we've become used to
looking for the more common physical signals. Almost any kind of symptom can be
a hidden signal of stress. Learning to recognize the small, insignificant signals can
help us become more aware of our own sources of stress.

TWO THINGS COME TO MIND WHEN I THINK OF FAT: THE ROLL OF IT creeping over my belt, which I loathe, and a certain Hungarian peasant food called szalonna, which I love. Szalonna is a chunk of pig fat speared on a stick and roasted over the coals until it drips smokey, bacony, delicious grease. You press the hot drippings into a slice of rye bread sprinkled with paprika, top it with raw onion and cucumber slices, and eat. Szalonna may be the Antichrist to a cardiologist, but, by God, it's good. And gone from my lips forever.

Like many people, I avoid fat. Doctors and nutritionists have been warning us against it for years. An entire health-products industry has sprouted from the idea that fat equals poison. Just try to find some fat at the supermarket these days. It seems every label broad-

So we've decided to spell it all out for you – to identify the good, the bad, and the hidden fats – and to show you hassle-free ways to eat a healthy diet, fat included.

Why fat has got a bad reputation

A fatty diet is linked to heart disease and to colon and prostate cancers, all major killers of men. The average man consumes close to 40 percent of his daily kilojoules from fat – too much, according to the Heart Foundation, which recommends an intake of no more than 30 percent of kilojoules from fat. We at *Men's Health* go even further: we recommend that you keep fats to 25 percent of your total kilojoules.

But you already know that. What you may not know is that there are lots of different types of fat, and that some are worse for you than others. In fact, some are so good for you that they're called 'essential'.

The fats of life

What's missing from your low-fat diet? Fat! Here's why and how to eat it and still lose weight

casts 'fat-free', 'low-fat', 'less fat', no fat', or 'Absolutely no fat guaranteed'.

Though these products crowd the shelves, the nation in general is becoming less healthy and more heavy. According to a 1997 South African review of the literature from 1975 to 1996, fat intakes for all South Africans, especially saturated fat, are increasing with a corresponding decrease in carbohydrates and fibre intakes.

The number of obese people in South Africa is also on the rise, with the highest prevalence in Black women (50 percent). Over 40 percent of all South Africans are overweight.

One big reason for this, according to professor of nutrition John Allred, is that we're eating many more kilojoules than ever before – on the order of 1 260 or more per day than we consumed in the late 1970s. Call it the no-fats domino theory: less fat equals less guilt equals more eating. "Perhaps if we weren't so anal about fat, we'd all be a lot thinner," says Allred.

Worrying less about fat is an appealing notion, and some respected nutrition gurus are even trumpeting fat's return. A large, long-term Harvard University study published recently in the *New England Journal of Medicine* suggests that, although the total amount of fat you eat is still important, it's the type of fat you eat that really determines your heart-attack risk.

So how are men supposed to eat? "Fat was bad and now it's supposed to be good again; that just confuses the consumer," says professor of human nutrition Adam Drewnowski. "You have to be a nutrition expert yourself just to figure out what the nutrition experts are talking about."

The glossary of fat

Saturated fats You find them mainly in meats, butter, cheese, eggs, shortening, tropical oils, some nuts and some vegetable oils. There are several saturated fatty acids, including palmitic acid, myristic acid, lauric acid and stearic acid.

All you need to know is that most of these fatty acids raise your low-density lipoprotein (LDL) cholesterol, which can clog artery walls and increase your risk of heart disease and stroke. The one blameless saturated fat is stearic acid, which won't raise your LDL levels and may actually lower them.

Saturated fatty acids are solid at room temperature. So if you can carve it into a swan, you can be sure it's saturated. Try to keep these fats to five percent of your daily fat kilojoules.

Trans fatty acids They occur naturally in red meats and dairy products, but you'll also find them in margarine, crackers, biscuits, cakes and many deep-fried foods, especially fried chips. In processed foods, a trans fat is created when hydrogen is added to vegetable oil to keep it 'stable' for frying (unstable oil makes food taste bad) and to prevent it from going rancid. Processed-food makers have been replacing saturated fats (such as lard and beef fat) with hydrogenated vegetable oils to cut out cholesterol. Unfortunately, trans fatty acids act like saturated fats in the blood, raising LDL cholesterol and lowering the 'good' high-density lipoprotein (HDL) cholesterol. Eat as little of these fats as possible.

Trans fats aren't trumpeted on nutrition labels, so look for the phrase 'partially hydrogenated vegetable oil'. "The closer to the top of the ingredients list you find partially hydrogenated vegetable

e more trans fats the food contains," says professor of food
te, Bruce Watkins.

no-unsaturated fats You'll find them in olive, canola and
t oils. These fats are considered 'heart-healthy', because
ither have no effect on cholesterol levels or, in the form of
acid, lower LDL cholesterol without affecting HDL choles-
But that's no green light to sponge up a bowl of olive oil with
of Italian bread. Only 15 percent of your daily fat kilojoules
d come from these fats.

ly-unsaturated fats These show up in corn, safflower, soy-
and sunflower oil. Unlike monos, polys lower both LDL and
But animal research has shown that a type of poly-unsaturated
iled conjugated linoleic acid, found in certain meats and dairy
ucts, may have strong health benefits – including the ability to
ct against atherosclerosis, to reduce the risk of diabetes, and
hibit the growth of prostate-cancer cells. Limit these fats to
ercent of your daily fat kilojoules.

sential fatty acids Omega-6 fatty acids and omega-3 fatty acids
he two basic ones. We get more omega-6s than we need from
ing oils, but not nearly enough omega-3s, which are found in
ish (for example, salmon oil) and in some nuts, linseed and
n leafy vegetables. Omega-3s appear to slow the body's pro-
on of prostaglandins, chemical compounds that can cause
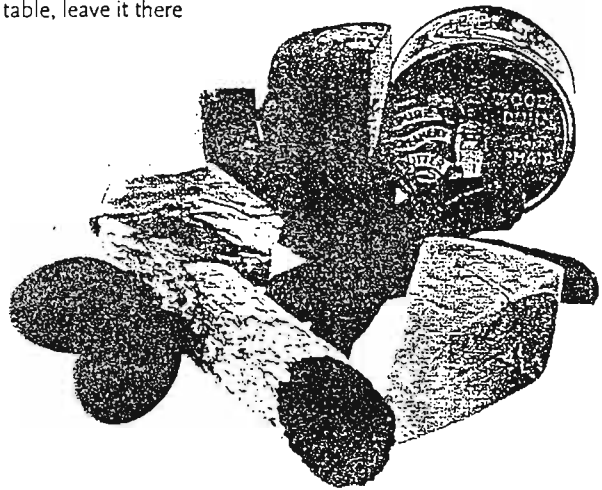ssive blood clotting, which can lead to heart disease.

althy ways to eat fat

re waiting for us to tell you that spare ribs, tempura prawns
French fries are healthy, aren't you? Sorry. There's just no way.
here is a healthy way to fit occasional rewards into your diet,
ing as you're clever about fat most of the time. Here are 14
s to cut the blubber.

ans fatty acids

alth bombers: four grams less
r day may halve your
ronary risk

it trans fats

o lite A little of anything, including fat, won't hurt you – unless
rans fat. According to a university study, you could cut your
t-attack risk in half by eating just four grams less of trans fat
a day. Start by using lite margarine. "As a general rule, the softer
margarine, the less trans fat it contains," says food and nutri-
specialist Professor Mark Kantor. If you tend to spread the
garine thickly on your morning toast, try Floro lite or extra-lite.

Ask for a baked potato instead of chips Most restaurants cook
their chips in shortening or vegetable oil loaded with trans fatty
acids. "Restaurants tend to re-use the oil," says Kantor, "which
causes chemical reactions that could make the oil even higher in
trans fat." One extra-large order of fried chips has up to 19 grams
of trans fat.

Avoid the call of the vending machine If you push 'E5' for your
midday snack, chances are it's loaded with trans fat. That's be-
cause nearly every processed snack food is made with partially
hydrogenated vegetable oil. Even a seemingly healthy processed
snack can tip the trans fat scale. A good guide: if the snack leaves
your fingers feeling greasy, you can bet it contains trans fat.

Saturated fats

Hard Rock if it's solid on the
table, leave it there

Select your saturated fats

Take your vitamins with your Aylesbury As bad as saturated fat
can be in excess, you still need some fat to utilise important fat-
soluble vitamins. In a study published in the *American Journal of
Clinical Nutrition*, five subjects were given beta-carotene supple-
ments either on an empty stomach or with some fat. "The source
of fat was ice cream, the vanilla Swiss almond variety," says
Drewnowski. "After eating that, beta-carotene absorption went
through the roof." Other fat-soluble nutrients include lycopene, a
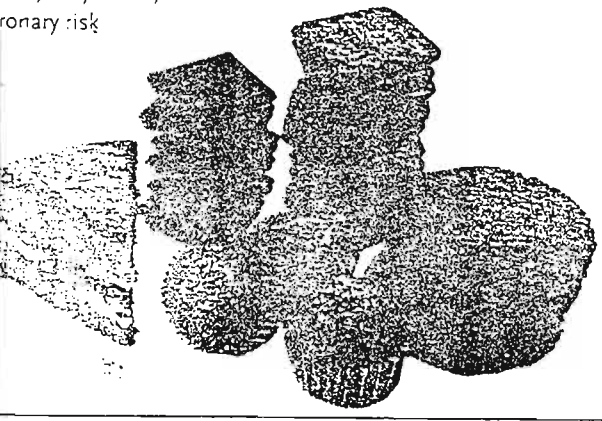prostate-cancer fighter, and vitamins D, E
and K.

Don't let a decadent doughnut lighten
your coffee "Some people drink cups of cof-
fee that are three-quarters coffee and one-
quarter milk or cream," says Kantor.
Half-and-half contains two grams of satu-
rated fat per two tablespoons, but when
restaurant waiters lighten your coffee, they
typically use anywhere from four to eight
tablespoons. That's as much as nine
grams of saturated fat – more than you'd
get from eating a hot dog.

Keep track of your hamburger intake
for two weeks You'll probably be shocked
at how many you eat. "One of the most

Fat fact 1

The different types of fat
share the same hefty
number of kilojoules: 150
per teaspoon. Kilojoules
mean weight. Limiting
these kilojoule-dense
foods will go a long way
towards helping you
drop kilograms.

fat intake, you'll be missing out on the only natural sources of CLA: beef and lamb. ...ted, CLA supplements are available in h-food shops, and some supplement manu...rers suggest that CLA will build muscle ...s and decrease body fat. But research has ...o provide conclusive proof. And according ...i FDA study, a few of the commercially avail...supplements actually contain no CLA at all.

...imise omega-3 fatty acids

...ok for deep-pink salmon Numerous studies ...suggested that omega-3s have heart-healthy ...fits. In one study, 295 men who ate one meal ...tty fish per week were found to have half as ...a risk of heart failure caused by arrhythmia ...en who ate no fish. So choose darker-...ured salmon, which is packed with omega-3s; ...rams of salmon contains nearly two grams of ...ega-3s. You can take in about a gram of ...ega-3s from 85 grams of tuna chunks in brine. ...use light or low-fat mayonnaise if you make ...salad.

...ight heart disease and depression with an ...ega-3 salad First mix up a dressing that contains linseed oil. It has a sharp, nutty taste and is high in linoleic acid and omega-3s. Just one cup contains a whopping 28 grams. Then skip the iceberg lettuce and use spinach instead; both are also good sources of omega-3s. Now dig in with a smile on your face – this meal could help you fight depression. A study published in *Biological Psychiatry* compared the omega-3 levels in healthy people with those in people diagnosed with depression. The depressed people's omega-3 levels were an average of 40 percent lower. Linseed oil should be cold

Essential fatty acids

Fresher cooker: Your blood is hot to clot, but fish and vegetables can slow it down

...t fact 4

...ocado contains ...al fat (30 grams) ...ny other fruit or ...le, and about the ...amount as a fried ...en breast. But 20 ...of this fat is mono...rated – the kind that ...lower your levels of ...DL cholesterol.

pressed and stored in a dark container in the fridge because of its high rancidity potential.

Don't buy your fish oil in a bottle The best way to get more omega-3s is through natural sources. Buy chopped walnuts, sesame seeds, or pumpkin seeds. All are rich in omega-3s, and they're just as convenient as supplements.

A final helpful piece of advice: if you're including too little fat in your diet – fat chance – go to a kosher delicatessen and order a schmaltz sandwich. You'll get 100 percent rendered pig fat slathered between two hunks of bread. Just ¼ cup of the stuff packs 51 fat grams and 1 935 kilojoules. That's more than four times the number of kilojoules from fat you should be eating in a day.

By Jeffrey Csatari

...ur reasons never to eat a no-fat meal

You need energy Gram for gram, fat has more energy than carbohydrates or protein. In fact, fat has more than twice the energy of an equal amount of carbohydrates and proteins.

You want to avoid a fat binge "Scatter your fat intake over the course of the day," says professor of nutrition John Allred. Allred made a surprising discovery in a recent study: men who ate low-fat, high-carbohydrate lunches ate more fat at dinnertime. "Our bodies are apparently much more in control of our food choices than we think," says Allred. "There seem to be biochemical signals that regulate our fat intake."

You need satisfaction Don't disregard the feeling of satisfaction fat gives you. It's important. It can keep you from binging on empty kilojoules. Fat takes up to 3½ hours to digest, far longer

than simple sugars do. You won't feel hungry as soon after snacking on a small piece of cheese as you would after scoffing a bag of dried fruit.

4. You want to lose weight If you want to lose weight, forget fat and just eat less food when you eat; about one-third less would be a good goal. A university study tested this theory. Researchers placed one group of people on a fat-restricted diet and another group on a low-kilojoule plan. The low-kilojoule group lost more than twice as much weight as the low-fat group, and they felt much better and far less food-deprived overall. "The most important number on a nutrition label is serving size," says Allred.

"A low-fat meal is low in neither fat nor kilojoules if you eat multiple servings."