

CHAPTER 1

Corporate expectations regarding the benefits of health promotion include increased productivity, lower medical and disability costs, reduced absenteeism and turnover, and improved satisfaction and morale (Reynolds & Shapiro, 1991). Based on a growing awareness that job stress has significant health consequences, substantial funds have been invested in stress management programmes (Latack & Havlovic, 1992). However, according to Cullen & Sandberg (1987) and Higgins (1986), there exists a great paucity of evaluative research of job stress reduction techniques, given the increasing number of stress management programmes offered. In many instances, strategies are introduced on the basis of an aura of face validity and intuitive appeal, rather than on scientific evaluation.

This study aims to investigate the efficacy of a stress management programme in terms of benefits for the individual (reduced stress; increased coping capacity; heightened perception of control) and organisation (increased job satisfaction; lower propensity to leave), and to contribute research evidence regarding the implementation of group worksite stress management interventions. A further aim of this study is to determine whether the intervention proves to be more beneficial, in terms of psychological and behavioural outcomes, for those demonstrating negative or positive affective predispositions.

A stress management programme, as a treatment approach finds its theoretical basis in two key areas (Roskies, 1987): firstly, stress theorists' conceptions of health and illness; and secondly, therapies developed by cognitive behavioural practitioners. Both of these areas will be explored in the following section.

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in loving memory of a special friend

Thomas Bolte

1968 - 1996

*Ich wünsche Dir Gottes Segen
auf all Deinen Wegen*

Rainer Haak

ABSTRACT

Stress management training is costly, yet widely used in industry with high expectations of the immediate and long-term benefits to both individual employees and the organisation (Monat & Lazarus, 1991). It has become apparent that, in spite of the banality of such stress management training, there is a significant lag in evaluative research to support these techniques (Cullen & Sandberg, 1987).

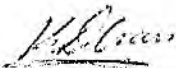
The aim of the study was thus to appraise the effectiveness of a stress management programme in terms of individual psychological benefits (reduced stress; increased coping capacity; perceived control) and work attitudes (job satisfaction; propensity to leave the organisation). A second aim of the study was to determine whether, over the course of the intervention, there would be any significant differences in the outcome of the programme, for those demonstrating negative or positive affective predispositions.

Data was collected using a self-report strategy in a field setting, using a short-term longitudinal research design. The sample consisted of 27 employees participating in a stress management programme. Matched-pair t-tests were generated to evaluate the extent of the impact of participation in the stress management programme on subjects, from pretest to posttest.

The main findings of the study were that the stress management programme intervention yielded only small changes in stress, coping, perceived control, job satisfaction and propensity to leave. Theoretical and practical implications of the findings are discussed and future directions for research considered.

DECLARATION

I hereby declare that this dissertation is my own, unaided work. It is submitted for the degree of Master of Arts in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination in any other university.



Karen Crous

31 January, 1996.

A CRITICAL EVALUATION OF THE EFFECTIVENESS OF
A STRESS MANAGEMENT PROGRAMME

Karen Deborah Crous

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demands made on the person may not be perceived as threatening. In the following section, stress management training approaches will be introduced.

STRESS MANAGEMENT PROGRAMMES

Stress management, according to Roskies (1987), is not a specific technique applied to a specific condition of stress, but rather a general treatment approach to a broad category of adaptational and health outcomes related to stress. Stress management is based on a theoretical viewpoint, and differs from psychotherapy by its emphasis on person-environment interactions, rather than intra-personal conflicts (Roskies, 1987).

Stress management interventions are designed to teach workers healthy coping strategies to deal with work-related stress (Ross & Altmaier, 1994). The goal is thus to help individuals learn new coping skills to help them address internal and external demands. The aim of treatment is, however, not only to improve a person's ability to change the environment, or to eliminate all painful feelings concerning it. According to Roskies (1987), success lies in the individual's ability to function in spite of some distress. The assumption is that an individual who has successfully overcome difficulties in managing one situation, will better be able to face the next problem with increased confidence (Roskies (1987)).

Stress management thus refers to a wide variety of techniques and strategies (see Figure 1). Interventions can however be categorised by the way in which the strategy is used to combat stress (Ross & Altmaier, 1994). Preventive coping strategies aim to address the perceptions of stress, and are operationalised in monitoring stressors and symptoms; marshalling resources; tolerating unavoidable stressors and

COPING RESOURCES

Coping resources are those personal, social and organisational elements which the individual perceives as being present in the situation and which influence whether a particular coping strategy can be implemented (Dewe, 1989). Roth & Cohen (1986) indicate that assimilation and resolution of trauma may be impossible as a result of a person's limited resources.

Coping resources can be broadly grouped into three categories (Lazarus & Folkman, 1984):

1. **Personal resources** include physical (health and energy), psychological (positive beliefs) and competence (problem-solving and social skills) resources. Social skills, or the ability to communicate is another important personal resource.
2. **Social support** refers to people receiving emotional or informational support in order to cope with demands.
3. **Material resources**, including financial resources may also be used to address certain demands.

Lazarus & Folkman (1984) point out that resources available to a person may vary across time. Thus the presence of particular resources, by their presence, cannot guarantee the resolution of a demand. Coping resources should therefore be considered as an element in the coping process, and subject to the personal (eg. internalised beliefs) and environmental constraints which limit the use and availability of resources. The relationship between resources and coping is mediated by personal and environmental constraints and level of threat.

Stress management techniques assume that methods can be learned, and integrated into one's coping framework. The programmes are designed to teach individuals how to develop new coping resources, and mobilise existing coping resources, so that new

to tasks by learning new skills or improving personal coping resources.

According to Lazarus & Folkman (1984), problem-focused coping is more likely to occur where individuals appraise conditions as amenable to change, or 'controllable'.

Emotion-focused coping

Emotion-focused forms of coping are aimed at regulating emotional distress without influencing the objective conditions which are problematic (Lazarus & Folkman, 1984; Latack, 1986). Strategies include avoidance, minimization, distancing, selective attention, positive comparisons, and wresting positive value from negative events (Lazarus & Folkman, 1984). According to Lazarus & Folkman (1984), emotion-focused coping may serve to increase emotional distress in order for people to mobilize themselves to action.

Emotion-focused coping strategies have been acknowledged as efficacious for stress in the short-term (Violante, 1992), while not proving useful in solving the problem of stress indefinitely (Bridger, 1978; Violante, 1992).

Emotion-focused coping is more likely to occur when the individual perceives that he/she has no control over the situation, and nothing can be done to modify the potentially harmful environmental conditions (Lazarus & Folkman, 1984). This assumption has been empirically confirmed, as problem-focused coping has been found to be more effective when the situation is controllable (Folkman, Lazarus, Gruen & DeLongis, 1986). Uncontrollable situations may be better tolerated by emotional regulation or emotion-focused coping (Folkman et al., 1986).

(Edwards, 1988, p. 243). As a feature in the stress process, coping plays an important role (Dewe, 1989).

MULTIPLE FUNCTIONS OF COPING

While there is little agreement on exactly how coping strategies should be evaluated, many taxonomies, upon closer inspection do reveal classifications according to certain broad themes. One of the better known classification systems was formulated by Lazarus and Folkman (Eg. Folkman & Lazarus, 1980; Lazarus & Folkman, 1984). Lazarus & Folkman (1984) draw a distinction between two coping functions: The first aimed at altering the environment, referred to as problem-focused coping; and the second, aimed at regulating emotional response to the problem, referred to as emotion-focused coping. According to Folkman & Lazarus (1980), the two strategies can occur together, but one or the other generally predominates.

Problem-focused coping

Problem-focused coping refers to strategies aimed at altering elements in the environment with a view to improving the person-environment relationship (Monat & Lazarus, 1991) or in other words, attempts to manage the situation (Latack, 1986). Implicit in this, is the notion of problem-solving, which refers to efforts directed at defining the problem, generating alternative solutions, weighting the alternatives in terms of costs and benefits, selecting the most appropriate alternative and acting on it (Lazarus & Folkman, 1984). More than simply a problem-solving approach, directed at objective conditions, problem-focused coping may be directed inward, such as adjusting motivational or cognitive orientations such as shifting level or direction of aspirations, reducing ego involvement, finding alternative channels of gratification, developing new standards of behaviour (Lazarus & Folkman, 1984), adopting new approaches

'process', which views stress and coping as related concepts. An event becomes stressful when demands are appraised as exceeding the individual's resources; and coping refers to the mobilisation of behavioural or emotional resources to deal with those demands.

Coping is thus defined here as one's cognitive and behavioural efforts to manage internal and external demands appraised as taxing or exceeding the adaptive resources of a person (cf. Dewe, 1989; Lazarus & Folkman, 1984; Latack, 1986). Coping includes not only the strategies employed by individuals to manage major life events, but also the more discreet processes which guide people in the regulation of their daily lives (Taylor, Buunk & Aspinwall, 1990). These include responses which control or avoid or prevent personal distress (Violante, 1992).

Central to the transactional perspective of stress and coping, is the concept of appraisal (Steptoe & Vogele, 1986). Appraisals can be separated into primary appraisal and secondary appraisal (Lazarus & Folkman (1984). Primary appraisal is concerned with the recognition that the individual is under stress ('Does the event affect me?'), while secondary appraisal seeks to evaluate coping, resources and options ('What can I do?'). Primary and secondary appraisal come together to shape the meanings of encounters (Dewe, 1991).

Therefore, in contrast to approaches which emphasise coping traits, styles and dispositions, the 'process' approach to coping focuses on active, on-going coping strategies which vary across time and situations (Monat & Lazarus, 1991). According to 'process theory', coping is viewed as "a critical component of a negative feedback loop, representing the means by which the individual affects the determinants of stress and thereby attenuates the deleterious impacts of stress on well-being"

Typically, coping styles are classified according to a hierarchical model (eg. Vaillant, 1977; Vaillant, Bond, & Vaillant, 1986; Haan, 1977). In hierarchical configurations, coping is represented at the apex of the hierarchy as the highest level of adjustment, with each inferior level lower on the hierarchy representing poorer reality-orientation and thus lesser coping efficacy (Edwards, 1988).

Trait approaches assume that a stable pattern or style of coping will be used across stressful situations (Monat & Lazarus, 1991). Coping styles are typically inferred from personality tests (Edwards, 1988; Monat & Lazarus, 1991), and not by actual observations of the individual confronted by the critical incidents. Thus this 'static, structural perspective' (Lazarus & Folkman, 1984) would allow researchers to identify the 'deniers', the 'vigilantes' without being able to anticipate how a person would respond in different stressful encounters (Lazarus & Folkman, 1984). The usefulness of these assessment techniques are, however limited as they have been found to show limited generality (Monat & Lazarus, 1991) and modest predictive value (Lazarus & Folkman, 1984; Edwards, 1988). One of the flaws of this approach seems to be the uni-dimensionality of the trait measure, which may not accurately reflect the multidimensional quality of coping processes used in diverse stressful encounters (Lazarus & Folkman, 1984). Research evidence suggests that coping processes are multidimensional, and vary over time, and across situations (Edwards, 1988). Trait approaches may well underestimate the complex nature of coping efforts (Lazarus & Folkman, 1984).

THE 'PROCESS' APPROACH

The approach favoured in this study focuses on active, on-going coping strategies which vary across time and situations (Monat & Lazarus, 1991). Implicit in this approach is the notion of

However, what is meant by coping, and how it functions in the process of adaptation has been expressed by many in terms which indicate divergence in theory, research and understanding (Edwards, 1988; Roth & Cohen, 1986). The typical approaches to coping in the literature will be briefly considered.

TRADITIONAL FORMULATIONS

The 'Response theory' approach defines coping as "acts that control aversive environmental conditions, thereby lowering psychophysiological disturbance" (Lazarus & Folkman, 1984, p. 118). However, the focus rests on avoidance or escape behaviours, and is criticised as being simplistic, uni-dimensional, and omitive of the role of cognitive coping and defense (Lazarus & Folkman, 1984)

Coping is typically defined, according to the psychoanalytic or ego psychology model, as realistic and flexible thoughts and acts that solve problems confronting the individual (Edwards, 1988; Lazarus & Folkman, 1984). The important coping criterion is adherence to reality (Lazarus & Folkman, 1984) as the focus of this approach is on the ways the individual perceives his/her relationship with the environment. This perspective has lead to the popularised structural view of coping, whereby coping is seen as a style or trait, rather than a dynamic ego process (Lazarus & Folkman, 1984). Traits are defined as properties of persons that dispose them to react in certain ways in given classes of situations (Lazarus & Folkman, 1984). Of the most popular of these used in stress/coping literature are 'repression-sensitisation'. A style refers to a consistent way of relating to particular types of situations or people (eg. ambiguous or clear; temporary or chronic) (Lazarus & Folkman, 1984).

The interactive view holds that a 'stressor' is not inherently stressful (McMichael, 1978; Singer & Davidson, 1991). A stressor may be any potential threat in the environment. And stressors only elicit stress responses when defined as threatening by the individual (Singer & Davidson, 1991). Therefore people do not necessarily perceive a situation or problem in the same way, as a pleasant or noxious stimulus can be considered desirable, interesting or non-threatening (Singer & Davidson, 1991). In the organisational setting, change in the status of the individual or the organisation, rather than 'noxious elements' may elicit significant stress responses. Thus individual perception, and the process of appraisal is important in understanding the stress process (Cox, 1985; Lazarus & Folkman, 1984; Singer & Davidson, 1991).

In the present research, psychological stress is defined in the interactionist tradition, as a relationship between the person and environment that is appraised by the person as taxing or exceeding his/her resources and endangering his/her well-being (Lazarus & Folkman, 1984).

COPING THEORY

Implicit in the 'adaptation' feature in the work of Selye; and the restoration of equilibrium, which features in the psychoanalytic approach to stress and well-being, is the idea that individuals, rather than merely being victims of their environments, fight back and struggle to manage psychological stress. This is known as 'coping' (Lazarus & Folkman, 1984). Lazarus & Folkman (1984) have indicated that since the 1960's there has been increasing acceptance that stress is an inevitable aspect of the human condition while it is coping that makes the major difference in adaptational outcome. Consequently, in many cases, emphasis has shifted from stress to coping (Lazarus & Folkman, 1984).

INTERACTIONIST APPROACH

The weaknesses of the traditional, linear, stimulus-response models of stress, lie in the conceptualisation of psychological stress, and in clarifying the relationship between stress and health (Gruen, Folkman & Lazarus, 1988). The interactive model is thought to overcome some of the inadequacies of traditional models.

Along with the development of the 'person-environment fit' model, came the understanding that it is both individual and environmental factors which, in combination, contribute towards a stress response (McMichael, 1978). Stress is seen as relational in nature (Dewe, 1989), involving a transaction between the individual and the environment (Lazarus & Launier, 1978; Cox, 1985). According to this approach, when there exists a poor fit between the person and environment, the wellbeing of the individual is threatened, and manifestations of stress, such as job dissatisfaction, anxiety, depression may follow (McMichael, 1978).

However, while the person-environment fit model distinguishes between stressful events as they exist in the environment, and individual's perceptions of them (Van Harrison, 1978), the meaning of these factors, or the process of 'appraisal' has largely been ignored (Newton, 1989). The interactionists (Gruen et al., 1988; Lazarus & Folkman, 1984), building on the 'person-environment fit' model, conceptualise stress as "the product of many interacting person and environmental antecedents, mediating processes... and short-term and long-term outcomes, each capable of influencing the other" (Gruen et al., 1988, p. 744). The 'mediating processes' intrinsic to the stress concept, refer to the processes of appraisal and coping (Dewe, 1989; Dewe, 1991; Lazarus & Folkman, 1984), where appraisal refers to the meaning individuals give to a particular encounter (Dewe, 1991).

'Non-specificity' following Selye's (1974) formulation does not mean unspecified, but rather, "occurring in response to every stressor" (Singer & Davidson, 1991, p. 38). Selye (1974) contended that stressors all elicit the same physiological adaptive stress response, regardless of whether the challenging situation is unpleasant or pleasant. More important than the status of the stressor, according to Selye (1974), is the intensity of the demand for readjustment. His research lead Selye (1974) to conclude that stressors, comprising a wide variety of environmental agents, all produce a common, specific pattern of physiological reactions.

The usefulness of the 'Physiological response hypothesis' is that since Selye's pioneering work in the 1930's, it has been acknowledged that the risk of developing a variety of diseases and illnesses, such as cancer, ulcers, high blood pressure, respiratory disease, is increased in the presence of stress (McMichael, 1978; Selye, 1974). These are what Selye (1956) has referred to as 'diseases of adaptation', and consequently increasing medical and psychological research has been directed at the 'morbid manifestations' (Selye, 1974) of stress.

The reactive model of stress has been criticised on the grounds that the stressfulness of any particular situation is very much determined by personal conditioning variables such as personality or the salience of the experience (McMichael, 1978). Response theory has limited usefulness in portraying the psychological meanings of stress reactions. Monat & Lazarus (1991), by way of example, indicate the common response pattern (increased blood pressure or heart rate) to different stimulus conditions: heavy exercise and extreme fright.

An introduction to the major theoretical approaches to stress will allow us to derive an appropriate research paradigm.

STIMULUS DEFINITIONS

Dohrenwend & Dohrenwend (1974) and Holmes & Rahe (1967) are among those who define stress in terms of environmental stimuli which act upon the individual and result in the experience of stress. This stimulus approach, also known as the 'life-events' approach, assumes that stressors exist in the environment, external to, and independent of the individual. Furthermore, these objectively defined events in the environment are normatively stressful to those who experience those events (Lazarus & Folkman, 1984). In occupational stress, for example, stress is a term used to refer to job demands (Newton, 1989).

Critics of this approach argue that no situation can be inherently stressful (Monat & Lazarus, 1991). Fisher (1984) comments that, the 'independent variable' definition or stimulus definition of stress is inadequate as it does not allow for individual differences in the evaluation or experience of events as stressful. Cues in the environment which may precipitate harmful or painful experiences may be interpreted quite differently (Monat & Lazarus, 1991). This approach was thus not used in the present study.

RESPONSE-BASED MODELS

A classic response-based definition of stress is that of Hans Selye (1974), who conceived of stress as "the non-specific response of the body to any demand made upon it (p. 27)." According to this approach, stress exists in the individual's response to the environment.

DEFINITIONS OF KEY TERMS

STRESS

As early as the 14th century, 'stress' was acknowledged to indicate hardship, straits, adversity or affliction (Lazarus & Folkman, 1984). By the 1930's, with the work of Selye, the term 'stress' had matured into a clearly formulated concept providing an understanding of the experience of stress. (Lazarus & Folkman, 1984; Selye, 1974). Since then the notion of stress has evolved to encompass a large variety of phenomena and is used in a number of different ways (Singer & Davidson, 1991). Presently, there is no definition that satisfies even a majority of stress researchers (Lazarus & Folkman, 1984; Monat & Lazarus, 1991; Dewe, 1989; Selye, 1991), earning stress the reputation as "the most grandly imprecise term in the dictionary of science" (Newton, 1989, p. 442).

Confusion results as some understand 'stress' to refer to a set of 'external stimuli' (eg. Dohrenwend & Dohrenwend, 1974; Holmes & Rahe, 1967). Others prescribe to variations of Selye's (1974) 'response-based' definition of stress (eg. Fisher, 1984) and others see stress as an 'interactional process' between the environment and the organism, with stress levels being mediated by both environmental and individual characteristics (Dewe, 1989).

What has been made apparent by the controversy surrounding stress, is what Lazarus & Folkman (1984) capture in their assertion that stress is not a variable, but, "a rubric consisting of many variables and processes" (p. 12). In attempting to contribute to stress research, Dewe (1989) correctly identifies a need to clarify what we mean by stress, "since how we define stress influences how we research it and thus how we explain our results" (p. 994).

become stressful. Alternatively, in most situations, being given control reduces the effects of stress (Fisher, 1984). Tetrick & Lerocco's (1987) study found support for the moderating effect of control on the relationship between role stress and satisfaction. Sutton & Kahn's (1986) 'control over events' is referred to as a 'work-relevant antidote' against the symptoms of stress.

Roth & Cohen (1986) discuss perceived control in relation to coping strategies: approach and avoidance (orientation toward or away from threat). In situations where there is the potential for control, approach strategies allow the individual to resolve the crisis. This hypothesis is consistent with Lazarus, Folkman and colleagues (eg. Lazarus & Folkman, 1984; Folkman & Lazarus, 1985; and Folkman, Lazarus, Gruen, & DeLongis, 1986) who conclude that general control expectancies are related to the type of coping activities. Where there is no advantage to approach i.e. if the situation is uncontrollable, avoidance (or in terms of Lazarus & Folkman's (1984) taxonomy, 'emotion-focused coping') may reduce depression and anxiety (Roth & Cohen, 1986).

Several studies support these contentions: Folkman & Lazarus (1985) found that in a study of coping during mid-term exams, that problem-focused coping was used more than emotion-focused coping during the period of preparation for an exam, when the situation was 'controllable'. After the exam, however, when students awaited the results (uncontrollable situation), emotion-focused coping increased and problem-focused coping decreased. Ginter, West & Zarski (1988) similarly found that, as the situation is appraised as modifiable, coping efforts are directed at planning and problem-solving.

Compas, Banez, Malcarne & Worsham (1991) found that control beliefs and problem-focused coping are related positively and

individual to cope actively with problems (Puffer & Brakefield, 1989).

Belief systems may be either rational or irrational. Rational beliefs refer to attitudes that help the individual adjust to undesirable set of conditions. These are formed by the individual's desires, wishes, preferences, values or goals. Thus undesirable activating events, as interpreted by a rational belief system would lead to disappointment, irritation, annoyance, frustration. Irrational beliefs, on the other hand, are thought to sabotage one's fundamental desires resulting in self-defeating emotions such as anxiety, depression or anger. These emotions would hinder, rather than abet the solving of the problem, or the realising of goals.

Perhaps a useful interpretation of Ellis's (1978) views of belief systems is that they can be altered. By the dissecting of irrational beliefs, which may sabotage the attainment of one's goals and cause anxiety, and reformulating rational beliefs, perceptions of control may be enhanced, and the symptoms of stress relieved.

Conceptually, it is clear that beliefs about control will impact on the appraisal of a situation as stressful. A person with low efficacy expectations (Bandura, 1977) might not persist with coping efforts, as would another person who believes he or she can control the situation. The belief that events are controllable, or that one has the power to affect outcomes, is thus a valuable coping resource (Lazarus & Folkman, 1984). According to Lazarus & Folkman (1984), of the beliefs used as valuable coping resources, those pertaining to control have received a considerable proportion of research attention.

According to Fisher (1984), there is evidence to show the importance that if control is lost, even ordinary tasks may

reality in the desired direction (Fisher, 1984; Daniels & Guppy, 1994).

Control is regarded as a cognitive construct influencing a person's efficacy expectations rather than behavioural control as a coping resource implementation. Ganster & Fusilier (1989) suggest that an individual's perception of control may not necessarily be veridical. Even if a person has objectively defined powers of control over a situation, from the individual's perspective, no control is experienced at all unless he or she has awareness of it.

Beliefs about personal control feature fairly prominently in Ellis's (1978) Rational-Emotive Therapy (RET) approach to stress and coping. The first basic premise of RET is that rather than conditions being inherently stressful, these instances vary in relation to the perceptions and cognitions of those who react to the conditions (Ellis, 1978). Between the stimulus (activating event) and the response (or consequence) is the organism with the capacity to act individually, and thus differently from others (Ellis, 1978). In potentially stressful situations, individuals create or choose their own feelings of anxiety or depression (consequences) by picking a certain 'belief system' about the situations or activating events which have occurred. As Ellis (1978) explains thus, emotional consequences follow from the beliefs of the individual. This hypothesis has some supporting evidence:

Puffer & Brakefield (1989) provide evidence to support Weiner's (1979) suggestion that perceptions of lack of control over the environment may result in the individual attributing the cause of the stressful encounter to himself or herself (internal attribution), which lead to feelings of low self-esteem and helplessness. This was found to inhibit the ability of the

O'Connell's (1994) research, negative affectivity has been used to predict stress-related variables over one year.

POSITIVE AFFECTIVITY

In contrast to negative affectivity, positive affectivity refers to the predisposition to experience positive emotional states. Positive affectivity reflects enthusiasm, excitement and energy as relatively stable general affective level (Burke et al, 1993). Individuals high on positive affectivity have a generalised sense of well-being; consider themselves to be pleasurable and effectively engaged both in interpersonal and achievement contexts, feel self-efficacious, and are more likely to experience positive moods and emotions (Burke et al, 1993).

Various researchers (eg. Strutton & Lumpkin, 1992) have proposed that, while high negative affective people are more likely to use palliative or emotion-focused coping, that high positive affective subjects are more likely to deal with stress through problem-focused coping. Strutton & Lumpkin (1992) found, in their research on 'trait optimism' and 'trait pessimism', that optimists are more likely to use directed problem-solving and positive reinterpretation, and marginally more likely to use self-control.

In the present study, affectivity is investigated in the context of stress management training.

PERCEPTION OF CONTROL

Perceived control is defined as "a cognitive phenomenon that causes the individual to tolerate noxious situations better than one who does not perceive such control" (Ganster & Fusilier, 1989, p. 240). This occurs when the individual believes that what he or she does is instrumental in achieving a change in

However, Schaubroeck, Ganster & Fox (1992) found that in their factor analytic study, that negative affectivity did not measure a factor in common with measures of affective job strains. Furthermore, Chen & Spector (1991) found that relations between stressors and affective strains are at best only moderately influenced by disposition, but admit that there is some evidence of influence by negative affectivity.

A third explanation is that high negative affective individuals may actually experience more distress (Schaubroeck, Ganster & Fox, 1992). Researchers (eg Brief et al., 1988; Burke, Brief & George, 1993) have concluded that studies using self-report methods should include a measure of negative affectivity so that its effects may be monitored.

Negative affectivity has been found to influence coping styles. Elliott, Marmarosh & Pickelman (1994) have reported a link between negative affectivity and palliative and stereotypical uses of coping techniques. Strutton & Lumpkin (1992) found, in their research on 'trait optimism' and 'trait pessimism' in a sample of 101 salespeople, that pessimists are more likely to employ confrontive coping. They suggest that this is due to the possibility that confrontive coping involves actions that have dubious prospects for constructively altering the stress. In this regard, Strutton & Lumpkin (1992) suggest that this result appears to reflect a pessimist's expectation that other coping tactics will not work. Pessimistic salespeople, they found, used more self-indulgent escapism, seeking social support, and negative avoidance.

In longitudinal research, negative affectivity has emerged as a strong predictor of stress appraisal processes and the use of emotion-focused coping in stressful encounters over a five week period (Elliott, Marmarosh & Pickelman, 1994), and in Spector &

In the context of job stress, high negative affectivity individuals are thought to experience high levels of job stressors and perceived job strains (Spector & O'Connell, 1994). This has been empirically confirmed in the correlation of negative affectivity with measures of job stress (e.g. role ambiguity, role conflict, workload) and job strain (e.g. job dissatisfaction, and somatic symptoms) (Chen & Spector, 1991; Burke, Brief & George, 1993). Brief et al. (1988) found in their study, significant relationships between: negative affectivity and negative stress; negative affectivity and overall job dissatisfaction; and negative affectivity and somatic complaints at work. Schaubroeck, Ganster & Fox (1992) similarly found significant relationships between negative affectivity and strain indicators (e.g. life dissatisfaction and physical symptoms). According to Elliott, Marmarosh & Pickelman (1994), the outcomes of stress in high negative affective people, may be due to a tendency for persons high in negative affectivity to be vigilant to threats from the environment. According to Spector & O'Connell (1994), negative affectivity has been shown in cross-sectional studies to relate to several stressor and strain variables.

A further implication of negative affectivity for the study of stress is that high negative affectivity candidates are likely to reflect negativity in self-report measures of stress and strain, inflating observed associations considerably (Burke, Brief & George, 1993; Brief, Burke, George, Robinson & Webster, 1988). Three explanations have been offered to explain this (Schaubroeck, Ganster & Fox, 1992): Firstly, negative affectivity may comprise variance in common with self-report stress or strain; or secondly, it may simply be associated with over-reporting of job stress. Each of these is consistent with the findings of Brief et al. (1988).

would be subject to approach-avoidance conflicts, as the individual would desire a positive outcome, but fear a negative outcome (Cropanzana, James & Konovsky, 1993). A person low on both traits, would be relatively unemotional and unresponsive (Cropanzana, James & Konovsky, 1993).

Although personality research indicates that positive and negative affect are separate constructs, research on the work-related effects of trait affectivity has focused almost exclusively on negative affectivity (Cropanzana, James & Konovsky, 1993).

NEGATIVE AFFECTIVITY

Negative affectivity refers to the tendency for an individual to experience a variety of negative emotions across time and situations (Spector & O'Connell, 1994). Negative affectivity describes a pervasive negative orientation and "a propensity to view the world through a negative lens" (Burke, Brief & George, 1993, p. 403). Negative affectivity refers to a mood-dispositional dimension whereby individuals high in negative affectivity are more likely to experience distress and dissatisfaction; be more introspective and dwell more on their failures and shortcomings; tend to focus on the negative side of the world in general and thus have a less favourable self-view and be more dissatisfied with themselves and their lives (Block, 1965; Burke, Brief & George, 1993). Schaubroeck, Ganster & Fox (1992) found negative affectivity to be related to depression, life dissatisfaction and physical symptoms. High negative affective individuals are likely to be anxious, afraid, angry, tense or nervous. When low on negative affectivity, individuals report feeling placid, calm and content (Cropanzana, James & Konovsky, 1993).

1994) and hardiness have been identified in the literature and research on job stress. However, the primary area of research interest has been the stress-strain relationship itself (Spector & O'Connell, 1994), rather than a more direct emphasis on which personality type stands to benefit most from coping training. In response to this, trait affectivity is explored in the present study.

RESEARCH VARIABLES

POSITIVE AND NEGATIVE AFFECTIVITY

Two general dimensions of affective responding, which feature prominently in the affect literature, are trait-positive and trait-negative affectivity (Cropanzano, James & Konovsky, 1993). Trait affectivity refers to a dispositional tendency to experience states of high emotional arousal (Watson & Tellegen, 1985).

Although the terms 'positive' and 'negative' may suggest that these mood factors are opposites or negatively correlated, positive affectivity and negative affectivity are not opposite points on a continuum. According to Watson & Tellegen (1985), positive and negative affectivity are two large, independent, bipolar dimensions, indicating states of high emotional arousal. Positive and negative affectivity have been characterised as "descriptively bipolar but affectively unipolar dimensions" (Watson & Tellegen, 1985, p. 221). They emphasize that only the high end of each dimension represents a state of emotional arousal, or high affect, whereas the low end of each factor is defined as a relative absence of affective involvement (Watson & Tellegen, 1985). In theory, then, individuals may be simultaneously high, or low on both traits. A person high on both, would tend to be quite emotional, experiencing fluctuating moods in response to environmental events. Such an individual

however concludes that it is impossible to state unequivocally, a direct relationship between programme length (in total contact hours) and benefits to participants. In general, it has been found that studies of programmes with more contact hours have reported larger reductions in physiological measures and self-reported symptoms of stress (Murphy, 1984).

In various studies, stress management has been associated with significant reductions in anxiety, depression, somatic complaints, sleep disturbances, muscle tension levels, blood pressure and urinary catecholamine (Cooper & Payne, 1988). Evaluation has, however, been assessed over a short post-training period. The changes observed immediately after training have not always been maintained in follow-up evaluations, and regression towards baseline levels has occurred in many studies that contained a follow-up (Reynolds, Taylor & Shapiro, 1993). Murphy (1984) however found that of 13 studies reviewed, eight included a follow-up, all of which reported durability of self-report effects.

Reynolds, Taylor & Shapiro (1993) indicate that as studies of stress management programmes have accumulated, the interest in identifying differential effectiveness of components of the training has increased, in order that programmes be modified to maximise positive outcomes. Research supporting such a direction has, however, been sparse, and methodological difficulties have limited the generalizability of the studies reviewed.

Finally, while research has generally supported positive outcomes of stress management training, the question of 'who benefits most' has not been sufficiently addressed. During the 1980's personality enjoyed a resurgence of interest among researchers in the field of organisational psychology (Spector & O'Connell, 1994). Prominent personality variables, such as Type A, locus of control, negative affectivity, (Spector & O'Connell,

daily relaxation breaks of 15 minutes, with relaxation training, had positive results in terms of work performance and decreased somatic symptoms. Murphy's (1984) review indicates that apart from the usage of relaxation techniques to lower arousal in each of the 13 studies reviewed, significant physiological and/or psychological benefits were found to be associated with this technique.

Cognitive approaches are utilised in cases where individuals are inclined to exaggerate demands or indulge in excessive rumination (Hiebert, 1988). By changing the individual's self-dialogue and underlying belief systems, the cognitive approach encourages realistic appraisals of the demands and the individual's ability to cope with the demands in order to alleviate the experience of stress. Higgins (1986) found a training programme based on Rational-Emotive techniques to be effective in reducing the participants' scores on emotional exhaustion and personal strain measures. However, in her study, Higgins assessed this particular strategy in conjunction with time management techniques and assertiveness training, which are not strictly part of this approach.

Behavioural approaches to stress management include ensuring adequate nutrition, exercise, sleep and rest to aid the body in its recovery from a stressful experience, so that the individual may cope more adequately with subsequent experiences.

REVIEW OF RESEARCH

Research efforts in the field of worksite stress management have seen a steady increase since the 1970's (Cooper & Payne, 1988). Programmes are usually offered to workers in white collar occupations (Cooper & Payne, 1988; Murphy, 1984). Programme formats vary from one instructional session to several treatment sessions extended over several days or even weeks. Murphy (1984)

logistic and economic factors associated with this approach which makes it unrealistic. Such problems include the unwillingness of organisations to change their structure, and the significant disruption of production schedules. Consequently, interventions aimed at modifying stressful aspects of the work environment are rare (Reynolds, Taylor & Shapiro, 1993). Murphy (1984) cautions that organisations offering stress management training to workers and making no attempt to improve work conditions which generate stress do not meet their obligations in addressing the problem of job stress. Ideally elements of both the above approaches should be addressed. The focus of the present research is, however, on the former approach, as the current dominant approach to stress management.

While certain programmes seek to enhance employees' capacities to cope with stress through proactive skills training (problem-solving, assertiveness training, conflict management), the focus of stress management programmes, as indicated from a review of the literature and research, seems to be on tempering emotional reactions to stress, rather than affecting changes in the environment. According to Cooper & Payne (1988), training typically includes education, some type of relaxation exercise, and may additionally include meditation, biofeedback and/or a cognition-focused technique.

Physiological approaches seek to train individuals to induce a relaxation response. Such programmes include progressive relaxation, autogenic training, meditation, biofeedback (Forbes & Pekala, 1993). Peters, Benson & Porter (1977) found that simple relaxation techniques practised daily in the work environment produced positive changes (decreased symptoms, fewer illness days, enhanced performance and sociability-satisfaction). Higgins (1986) found progressive relaxation training and systematic desensitization to reduce emotional exhaustion and strain. Peters, Benson & Porter (1977) found that

lowering stressful arousal. Combative coping strategies aim to tackle stressful experiences in progress by avoiding stressors through life-adjustment; altering stress-inducing behaviour patterns and developing coping resources.

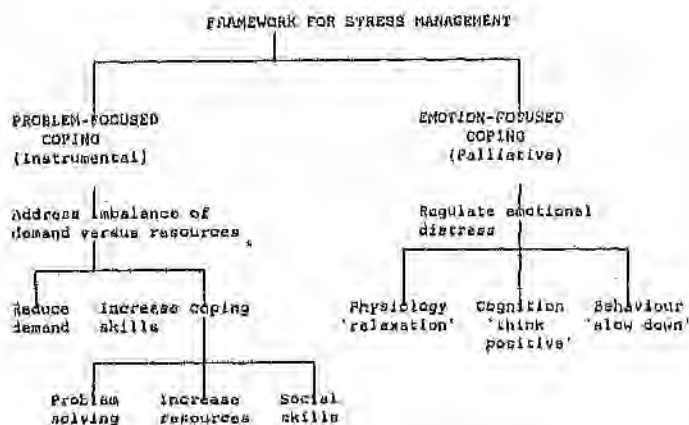


Fig 1. Framework for Stress Management Strategies

The workplace represents an ideal site for the implementation of health promotion programmes, as large numbers of employees are accessible, with social support networks already in place (Murphy, 1984). Murphy (1984) identifies several other advantages to worksite programmes: they can be established and evaluated quickly without major disruptions of work routines; they can be effective in dealing with non-work stressors which act synergistically with work stressors; they can be incorporated into existing employee training or assistance programmes or used to complement organisational change.

Interventions can be undertaken on two levels: on the individual level, an intervention can be designed to help the individual cope with stress; organisational-level interventions aim to change the workplace to reduce stress (Ross & Altmaier, 1994). Murphy (1984) suggests that while the organisational change and redesign approaches are preferable, there are significant

products), were involved in the stress management programme. The sample consisted of 27 employees. The only criterion for selection for the study, was that the subject would participate in the stress management programme. There was no random allocation of subjects, since every employee was scheduled to attend the programme. Each of the programme participants was invited to participate in the study. Although 27 questionnaires were administered, only 15 were returned to the researcher. This represents a response rate of 55.5% . Posttest questionnaires were sent to individuals in the programme, based on their participation at time 1. All 15 (100%) of the posttest questionnaires were completed and returned to the researcher.

ANALYSIS OF THE SAMPLE

Table 1 gives a demographic breakdown of the sample group. The total sample of 15 subjects, comprised both men (n=6) and women (n=9), predominantly English-speaking (86%), with relatively high educational qualifications (93.3% of the sample had a matric qualification; 60% of the sample had furthered their education post-matric). The mean age of the sample was 38.2 years of age. The average time in their jobs, was 3.5 years.

A further classification into high 'positive' and high 'negative affective' sub-groups afforded the opportunity for later comparison of these groups in terms of the research variables. Three cases were dropped from the analysis by affectivity classification, as their scores for positive and negative affectivity were too close to identify a predominant trait.

The 'positive affective' group of seven subjects, with a mean age of 39, was found to have relatively high educational qualifications. The sub-group consisted of both men and women, mainly English speaking, encompassing the managerial positions in the organisation. The five 'negative affective' subjects, by

Emotion-focused coping techniques aimed at helping the individual to regulate emotional distress, were included in topics such as 'relaxation techniques', 'visualising and affirming techniques', 'managing anger' and 'managing conflict'. Consistent with the literature, this training aimed at self-regulation in order to tolerate immediate stressful situations.

Much of the training centred on taking responsibility for one's own life-style, knowing one's limitations, and using stress as an opportunity for growth. The training programme was well-rooted in psychological theory, drawing largely from Albert Ellis' (1978) Rational-emotive theory. Irrational 'must-erbatory' beliefs are analysed. Participants are made aware of their tendency to 'Awfulize', and to 'damn oneself and others'. Techniques were focused on changing negative behaviours and reinforcing positive beliefs and behaviours, through visualising and practising the appropriate behaviour. The content of the programme was found to be consistent with programmes described in the literature (eg. Higgins, 1986).

An eight-week, self-paced follow-up programme was undertaken by participants, to help them concretise their newly acquired skills, and put the training into practise. The self-paced modules were covered using worksheets and readings. The topics included improving self-esteem; developing a positive attitude; handling worry; managing daily hassles; speaking assertively and handling criticism.

SAMPLE

A sample of employees was accessed through a client organisation of a stress management consultancy. All of the employees of the of the sales and marketing division of client organisation, (a high-tech company, specialising in polymers, petroleum and gas

CHAPTER 2

METHOD

SETTING

THE INTERVENTION PROGRAMME

The stress management programme under review was selected for study, as it adequately fulfilled certain important criteria regarding formalised stress reduction training. The programme was developed and staffed by psychology professionals, ensuring that the programme content was ethically sound, and consistent with current psychological practice. The programme material had been adapted for South African application, from an American programme, and ongoing re-evaluation and research was encouraged in order to further improve the programme. Lastly, the approach adopted in the programme was holistic and entirely consistent with Lazarus & Launier's (1978) concept of the transactional nature of stress, and theoretical approaches to coping. The programme was designed to suit the needs of the company, both in terms of content and time.

The stress management programme under evaluation adopted a multi-faceted approach. The first section was presented in the form of a two-day workshop. Several topics were presented, some by the trainer, others explored in smaller groups or in role-play. The basic coping techniques were covered, as described in the literature: Problem-focused coping techniques are identified in topics such as 'balancing your life', 'dealing with time problems', 'understanding job burn-out', 'emotional support'. Within these strategies, goal-setting and active problem-solving were encouraged with a view to creating a more 'balanced' life-style.

HYPOTHESES AND RESEARCH QUESTIONS

The purpose of the present study is to determine the effectiveness of a stress management programme.

Hypothesis 1. It is expected that the group, at time 2, relative to time 1, will exhibit

- 1.1 lower stress measures;
- 1.2 improved coping skills;
- 1.3 increased perception of control;
- 1.4 greater job satisfaction;
- 1.5 lower propensity to leave the organisation

The second objective of the present study is exploratory. The aim is to discover whether positive and negative affectivity influences the extent to which employees benefit from the programme. In other words, is there a correlation between positive and negative affectivity and changes in the research variables from time 1 to time 2.

Hypothesis 2, as a research question, may be asked as follows:

Are there significant differences between positive and negative affective subjects, with regard to the research variables, at time 2, relative to time 1?

RESEARCH MODEL

An overview of the study is presented in Fig.2, including the research variables to be used in assessing the value of the stress management programme under review.

PRETEST	PRE-INTERVENTION	INTERVENTION	POST-INTERVENTION
POSITIVE AFFECTIVE OR NEGATIVE AFFECTIVE	STRESS COPING PERCEPTION OF CONTROL JOB SATISFACTN PROPENSITY TO LEAVE	STRESS MANAGEMENT PROGRAMME	STRESS COPING PERCEPTION OF CONTROL JOB SATISFACTN PROPENSITY TO LEAVE

Fig 2. Diagrammatic representation of the study

proposed by Cooper & Payne (1988). Examples of such outcome measures would be job satisfaction, productivity, turnover. This study aims to address these issues.

Finally, previous research has shown that people high in negative affectivity experience more stress and strain (Spector & O'Connell, 1994), but no previous research has considered whether negative affective or positive affective people benefit equally from stress management programmes and coping training in alleviation of stress-related outcomes. Furthermore, a major limitation to most of the personality research in the job stress domain is its almost exclusive reliance on cross-sectional designs (Chen & Spector, 1994). This study attempts to explore some of the possible explanations, which cannot be investigated in a cross-sectional design, in a longitudinal study.

Previous longitudinal studies (eg. Spector & O'Connell, 1994), have been more concerned with monitoring the predictive value of affectivity over time. This study attempts to investigate the differential effects of an intervention, for different personality types, given that personality will influence initial perceptions of stress, coping and the research variables.

AIMS OF THE STUDY

The main objective of the present study is to assess the efficacy of a stress management programme in terms of individual psychological benefits (reduced stress; increased coping capacity; heightened perception of control) and work attitudes (job satisfaction; propensity to leave).

A further aim of this study is to determine whether the intervention proves to be more beneficial, in terms of psychological and behavioural outcomes, for those demonstrating negative or positive affective predispositions.

it is defensible to study the direct relationship between affectivity and propensity to leave. In support of this, Chen & Spector (1991) found that negative affectivity was significantly correlated to 'intention to quit'. Therefore in this study, the unmediated or direct influences of negative affectivity and positive affectivity on propensity to leave, are investigated.

RATIONALE OF STUDY

The processes through which individual and environmental factors combine to produce the cognitive state of stress and thus influence coping, has received little attention in work settings (Edwards & Cooper, 1988). Thus, by using the interactional model of stress, this study attempts to contribute to field research in stress and coping at work.

Previous studies have confirmed the effectiveness of stress management programmes in reducing distress (Cooper & Payne, 1988; Murphy, 1984). However, not much is known about the relative efficacy of the different coping methods used to deal with job-related stress (Strutton & Lumpkin, 1992), and the relative success of different training methods (Cooper & Payne, 1988). Worksite stress management studies differ widely in terms of many significant factors, which hamper comparisons of programmes and statements of general conclusion (Murphy, 1984). Thus the content of work stress interventions needs to be examined in terms of specific criteria (Reynold, Taylor & Shapiro, 1993), which will contribute to the pool of knowledge of the efficacy of certain strategies and relative benefits.

Furthermore, the content of work stress interventions needs to be evaluated in terms of the interface of the individual with the organisation. The investigation of the effects of stress management programmes on outcome measures reflecting the interaction of the individual with the organisation has been

1991; 1992; Fang & Baba, 1993). In terms of particular coping strategies, active coping has been associated with decreased intention to turn over (Puffer & Brakefield, 1989). In the present study, it was expected that those involved in the stress management programme would be less likely to leave the organisation, as participants are taught to identify and use their coping resources effectively to deal with the demands made on them.

Propensity to leave is also believed to be influenced by positive and negative affectivity (Cropanzana, James & Konovsky, 1993). Traditionally, positive and negative affectivity have been linked to propensity to leave, via organisational commitment. Since positive and negative affectivity relate to the frequency and intensity of emotions, they should influence the emotional reaction to the environmental events that produce organisational commitment. Thus high positive affective individuals should show higher organisational commitment, while conversely, high negative affective individuals should show lower organisational commitment. According to Cropanzana, James & Konovsky (1993), when individuals have a strong attachment to an organisation, they are more likely to exert effort and to make sacrifices for the company's benefit, and are less likely to leave when trouble arises. If negative affectivity and positive affectivity are associated with commitment, then dispositional affect may indirectly influence turnover intentions via its relationship to organisational commitment (Cropanzana, James & Konovsky, 1993).

However, Cropanzana, James & Konovsky (1993) found that in both of their studies, that propensity to leave was also directly related to positive affectivity, and negative affectivity. Yet in only one of their studies, was commitment to the organisation found to mediate the relationship between both positive and negative affectivity and propensity to leave. This suggests that

predisposed to experience discomfort (negative affective). Some debate had arisen that perhaps the predictive value of affectivity regarding job satisfaction, lay in its conceptual closeness. In other words, job satisfaction is merely part of the broader underlying construct of expressed pervasive positive outlook. Agho, Price & Mueller (1992) succeeded in proving that positive affectivity and job satisfaction are conceptually distinct, displaying discriminant validity. The findings of Staw & Ross (1985) are there more due to a valid relationship between these two construct. In justifying job satisfaction as a defensible work attitude, independent of trait affectivity, the relationship between job satisfaction and positive affectivity has attracted more research attention. Consequently it has been found that both negative affectivity and positive affectivity are related to job satisfaction (Cropanzano, James & Konovsky, 1993). Chen & Spector (1991; 1992) and Terry, Nielsen & Percharde (1993) found that negative affectivity was negatively correlated with job satisfaction. It was also found that in a sample of graduating college seniors, that job dissatisfaction was successfully predicted by measures of negative affectivity, over the period of approximately one year from graduation (Spector & O'Connell, 1994).

Job satisfaction in the present study is investigated in relation to both the stress management training and affect predisposition.

PROPENSITY TO LEAVE THE ORGANISATION

Propensity to leave an organisation refers to an intention to quit. Quitting, or 'turnover' is viewed as a voluntary separation of an individual from an organisation (Fang & Baba, 1993). Consistent with Selye's (1974) 'fight-flight' notion of stress and coping, stress has been found in the research, to be positively related to intention to quit (eg. Chen & Spector,

Lumpkin, 1992). Support was found for this hypothesis in Strutton & Lumpkin's (1992) study.

Work stress and strain has often been seen to reflect in employees' work-relevant attitudes, such as job satisfaction, and propensity to leave (eg. Chen & Spector, 1991). Coping techniques have also been found to influence these work attitudes (eg. Puffer & Brakefield, 1989). Therefore job satisfaction and intention to leave the organisation are examined in the present study.

JOB SATISFACTION

Job satisfaction is a work attitude, reflecting the degree to which a person experiences satisfaction with intrinsic and extrinsic features of the job (Warr, Cook & Wall, 1979). Stress has been found to be negatively related to overall job satisfaction (eg. Chen & Spector, 1991; Brief, Burke, George, Robinson & Webster, 1988; Fang & Baba, 1993), while coping has been found to moderate the stress-strain relationship. However, consistent with the literature and research on coping, the individual's coping strategy may influence the level of job satisfaction. For example, active coping has been found to be related to greater job satisfaction (Puffer & Brakefield, 1989), while avoidance coping strategies were found not to enhance job satisfaction (Koeske, Kirk & Koeske, 1993). It was expected that stress management training in the study would lead to enhanced job satisfaction.

Recent empirical evidence suggests that positive and negative affectivity may explain variations in employees job satisfaction (Agho, Price & Mueller, 1992; Cropanzana, James & Konovsky, 1993). Staw & Ross (1985) found in their study that employees who are predisposed to be happy (positive affective) are more likely to experience job satisfaction, than those who are

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reciprocally: A high sense of control will lead to a greater use of problem-focused coping, and problem-focused coping may enhance feelings of control, if they are effective in changing the environment. Emotion-focused coping efforts are unrelated to control beliefs, but instead are used to a greater or lesser degree in response to levels of emotional distress or arousal. Compas et al. (1991) furthermore found that emotional distress is lower when problem-focused coping is used and perceived control is high (a good match between control and coping). Heightened levels of emotional distress have been found when problem-focused coping efforts are used and perceived control is low (a poor match between control and coping).

Consistent with the above framework, in the organisational context, it has been found that workers will react less negatively to stressful jobs if they perceive that they have control (Ganster & Fusilier, 1989; Singer & Davidson, 1991). If a person with an enhanced perception of control will approach a crisis with more confidence, then control should be an important part of stress management training. A useful indicator of the success of a stress management programme may therefore be in the individual's increased perception of control over his or her work environment.

In line with previous findings, Strutton & Lumpkin (1992) found that problem-focused coping is more likely to occur when the situations appear amenable to change, or when people believe the stressor can be constructively handled. However, people who believe they can only endure rather than ameliorate stressful situations, likely turn coping efforts inward to assuage their own negative feelings. Consequently, it was hypothesised that dispositionally optimistic individuals would be more likely to deal with work-related stress through problem-focused coping, and that dispositionally pessimistic individuals would be more likely to use emotion-focused coping strategies (Strutton &

Job Satisfaction was determined using the a revised 6-item scale, originally developed as an 18-item scale by Brayfield and Rothe (1951). It is assumed that job satisfaction can be inferred from the individual's attitude to his or her work, following Brayfield & Rothe (1951). The scale is designed to measure overall job satisfaction, with items such as "I find real enjoyment in my job" and "I like my job better than the average person." A five point rating format was used, ranging from "strongly agree" to "strongly disagree". A high score implies high job satisfaction, Agho, Price and Mueller (1992) found the 6-item version of the scale to demonstrate acceptable reliability (Cronbach's alpha 0.9). Acceptable validity and reliability estimates have also been reported in studies by Brooke, Russell & Price (1988); Rousseau (1978); Price & Mueller (1981) and Sorenson (1985). In the present study, Cronbach's alpha of 0.78 was found to be acceptable. However, significance was not achieved in the test-retest reliability estimates (see Table 2.2).

Propensity to Leave the Organisation: The 3-item Propensity to Leave Scale was developed by Lyons (1971) to determine the potential for turnover among nursing staff, but has since been adapted to determine withdrawal behaviour in broader organisational settings (Cook, Hepworth, Wall & Warr, 1981).

For the first item, "How long would you like to continue working in your present job?" a six-point rating format was used, from 'one year'(1) to 'more than ten years'(6) (Bluen, 1986). A three-point response format, ranging from 'no'(1), through 'not sure' (2) to 'yes'(3), was used to replace the original five-point rating scale (Bluen, 1986) for two of the items: "If you were completely free to choose, would you prefer to continue working in your present job?" and "If you had to quit work for a while... would you return to your present job?". A low score on the Propensity to Leave scale, indicates a high intention to

reliabilities 0.75 for this sub-scale, and test-retest correlations at 4 weeks of above 0.90 (Paulhus, 1983). Paulhus (1983) reports construct validity for the Personal efficacy sub-scale, based on 3 validity studies. Support for the convergent validity of this scale was also demonstrated by Paulhus (1983), as a variety of predicted correlates for the scale, were substantiated. In this study, this scale was found to display satisfactory reliability (Cronbach's alpha 0.67). Test-retest reliability for this scale ($r=0.48$) was found to be non-significant.

Positive and Negative Affectivity were measured using 22 items from the Multidimensional Personality Index. 11 items assess positive affectivity, or the degree to which an individual is predisposed to be happy across time and situations (Agho, Price & Mueller, 1992). For example, "I usually find ways to liven up my day", and "I always seem to have something to look forward to." The remaining 11 items measure negative affectivity, or the degree to which the individual is predisposed to experience discomfort across time and situations (Agho, Price & Mueller, 1992). For example, "I often find myself worrying about something", and "Minor setbacks sometimes irritate me too much." The items in each of the scales are rated as 'true' (scored as 1) or 'false' (scored as 0). A high score on each sub-scale is interpreted as evidence of a positive (or negative) affective predisposition.

Cronbach alphas of 0.82 and 0.79 for the respective scales were reported by Agho, Price & Mueller (1992). Watson & Tellegen (1985) have also reported satisfactory validity and reliability for both scales. In this study, the positive affectivity and negative affectivity scales yielded Cronbach's alpha reliability estimates of 0.80 and 0.93 respectively.

In this study, reliability estimates range from 0.55 to 0.84 (see Table 2.2), with only one sub-scale (distancing) yielding an alpha of 0.37. The problem-focused coping sub-scales yielded Cronbach's alpha of 0.62, while emotion-focused coping yielded a better reliability estimate of 0.70. Alpha coefficients and Test-retest reliabilities are presented in Table 2.2. Problem-focused coping scale and emotion-focused coping scales both were found to demonstrate significant test-retest reliability ($r=0.77$, $p<0.001$ and $r=0.84$, $p<0.001$, respectively). Furthermore, the WCC has been used in South African research by Carter (1991) to investigate the relationship between burnout and coping, and was considered suitable for use in this study, taking into account, its weaknesses.

Perception of Control: Ganster & Fusilier (1989) recommend that since 'personal control' is a cognition, a self-report strategy should be adopted in order to operationalise it. This has indeed been the dominant approach in the organisational literature (Ganster & Fusilier, 1989). Perceived control was measured by the Spheres of Control Scale developed by Paulhus (1983).

The scale is based on a multi-dimensional model of perceived control, reflecting 3 primary behavioural spheres: personal efficacy; interpersonal efficacy and control over political events and institutions. In the present study, only the 10-item personal efficacy sub-scale was used, as it measures the individual's control expectancy over his or her personal life achievements, rather than over other people, or over external political systems.

The personal efficacy sub-scale explores perceptions such as "I can learn almost anything if I put my mind to it"; "Often people get ahead just by being lucky". A 7-point Likert rating scale was used, ranging from "totally inaccurate" to "totally accurate". The authors of this scale have reported alpha

distancing, self-control, accepting responsibility, escape-avoidance, positive reappraisal. The sub-scale 'seeking social support' falls into both categories, and was included in both in this study. Internal consistency of the Problem- and Emotion-focused coping scales were examined using Cronbach's alpha, yielding coefficients of 0.80 and 0.81, respectively (Folkman & Lazarus, 1980). Conger (1992) reports Cronbach's alpha ranging from 0.61 to 0.76 for the scales, due to the small number of items in each sub-scale, and weak stability estimates in terms of test-retest reliability.

Edwards & Baglioni (1993) found only weak support for the construct validity of the sub-scales using confirmatory factor analysis, however admitting that this is not surprising, given that the WCC items represent numerous coping methods, with little evidence for conceptually homogeneous item subsets. In fact, both the WCC and its preceding WCQ (Folkman & Lazarus, 1988), have been criticised for not meeting the required technical standards required (Hess, 1992).

Hess (1992) reminds us that the authors of the WCC designed the questionnaire to identify the thoughts and actions an individual uses to cope with a stressful encounter in everyday living. Coping is seen as an evolving strategy, rather than a coping disposition or style. Therefore, the questionnaire should measure "coping processes" and is not a "test" in the conventional sense. The authors therefore feel that traditional test-retest estimates are inappropriate (Conger, 1992). Conger (1992) warns that, given psychometric weaknesses of this measure, the Ways of Coping should be used as a "research measure" rather than a "test", and that it should be used with caution. In spite of these cautions, the Ways of Coping Checklist is still the most widely used inventory of coping responses (McCrae, 1984).

- (e). Accepting Responsibility (4 items, $\alpha = 0.66$), describing acknowledgement of one's own role in the problem (eg. "realized I brought the problem on myself");
- (f). Escape-Avoidance (8 items, $\alpha = 0.72$), describing wishful thinking, or behavioural efforts to avoid the problem (eg. "tried to make myself feel better by eating, smoking...");
- (g). Planful Problem-Solving (6 items, $\alpha = 0.68$), describing deliberate problem-focused efforts to resolve the situation (eg. "I made a plan of action and I followed it");
- (h). Positive Reappraisal (7 items, $\alpha = 0.79$), describing efforts to create positive meaning by focusing on personal growth (eg. "found new faith").

Although based on the original 68-item Ways of Coping (Folkman & Lazarus, 1980), unclear and redundant items were deleted, or reworded, and the response format was changed from yes-no to a four-point Likert scale (Folkman & Lazarus, 1985). This response format allows the respondents to indicate the frequencies with which they use each strategy, from 1 = 'not used', to 4 = 'used a great deal'. The questionnaire is positively scored (i.e. a high score reflects greater use of a particular coping style).

The sub-scales can further be classified into two groups: Problem-focused and emotion-focused coping approaches. A principal factor analysis by Folkman & Lazarus (1980), calling for two factors, and using varimax rotation, yielded empirical support for this rationally-derived classification. Problem-focused coping refers to cognitive problem-solving efforts, and behavioural strategies for altering or managing the source of the problem (Folkman & Lazarus, 1980). Problem-focused coping is made up of confrontive coping and planful problem-solving. Emotion-focused coping refers to cognitive or behavioural efforts aimed at reducing or managing emotional distress (Folkman & Lazarus, 1980), and consists of several sub-scales:

Coping: The revised 50-item Ways of Coping Checklist (WCC) (Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986) was used to assess coping ability. This scale was designed to assess cognitions and behaviours individuals use to deal with internal and/or external demands in a stressful encounter (Folkman & Lazarus, 1985). The WCC is potentially useful for examining how an individual copes with stress (Hess, 1992), and, as a research tool, may be quite suitable for measuring intervention effects (Hess, 1992).

The Ways of Coping Checklist is based a revised version of the 68-item Ways of Coping (Folkman & Lazarus, 1985), describing a broad range of cognitive and behavioural strategies to counter stressful experiences. The scale includes eight coping scales reflecting different coping strategies, which emerged from a factor analysis by Folkman, Lazarus and colleagues (Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986). The eight scales were found to account for 46.2% of the variance (Folkman et al, 1986).

The questionnaire includes the following sub-scales, with alphas reported by Folkman et al (1986):

- (a). Confrontive Coping (6 items, $\alpha = 0.70$), describing aggressive efforts to alter the situation (eg. "stood my ground and fought for what I wanted");
- (b). Distancing (6 items, $\alpha = 0.61$), describing efforts to detach oneself (eg. "went on as if nothing had happened");
- (c). Self-Control (7 items, $\alpha = 0.70$), describing efforts to regulate one's feelings and behaviour (eg. "I tried to keep my feelings to myself");
- (d). Seeking Social Support (6 items, $\alpha = 0.76$), describing efforts to seek emotional support (eg. "accepted sympathy and understanding from someone");

Variables	min	max	<u>M₁</u>	<u>SD</u>	<u>M₂</u>	<u>SD</u>	Alpha	Test-retest Reliability (r)
WCC								
Problem-focussed coping	18	72	42.67	7.30	41.67	6.26	.62	.77**
-Confrontative coping	6	24	12.07	2.81	11.33	1.80	.55	.69*
-Planful Problem-Solving	6	24	16.53	2.80	16.53	3.44	.62	.78**
-Seeking Social Support	6	24	14.07	3.94	13.80	3.03	.84	.80**
Emotion-focussed coping	38	152	48.13	13.77	46.53	13.07	.70	.81**
-Distancing	6	24	12.13	2.23	12.73	3.79	.37	.67*
-Self-control	7	28	16.80	3.36	16.60	3.38	.58	.85**
-Accepting Responsibility	4	16	10.67	2.64	10.20	1.78	.82	.40
-Escape-Avoidance	8	32	14.87	4.73	13.33	4.08	.78	.86**
-Positive Reappraisal	7	28	17.60	4.27	17.87	4.42	.77	.89**
-Seeking Social Support	6	24	14.07	3.94	13.80	3.03	.84	.68
Perceived Control	10	70	54.80	8.89	56.20	7.26	.67	.48
Job Satisfaction	6	30	20.80	4.44	20.67	6.83	.78	.41
Propensity to Leave	3	12	7.47	2.85	6.67	3.13	.75	.80**

M₁ refers to the mean score at time 1. A higher score reflects as high occurrence of that variable in all cases except for Propensity to leave, which is negatively scored (A higher score reflects a lower occurrence),

M₂ refers to the mean score at time 2.

*p<0.05

**p<0.001

Table 2.2. Description of the Measuring Instruments and Sub-scales at Time 1 and Time 2

Variables	min	max	<u>M₁</u>	<u>SD</u>	<u>M₂</u>	<u>SD</u>	Alpha	Test-retest Reliability (r)
Affectivity								
-Positive	0	11	7.53	2.80	-	-	.80	-
-Negative	0	11	5.20	4.30	-	-	.92	-
Perceived Occupational Stress	44	220	127.87	26.97	128.067	29.49	.94	.90**
-work dissatisfaction	8	40	18.80	5.44	19.53	6.51	.84	.83**
-work stress	7	35	21.93	6.25	23.13	6.50	.85	.89**
-recreation	6	30	17.20	5.31	16.87	5.19	.81	.80**
-ambition	9	45	30.07	4.25	28.73	4.91	.50	.77**
-social stress	5	25	13.27	3.86	13.86	4.25	.68	.75**
-overload	9	45	26.60	6.97	25.93	7.28	.84	.85**

M₁ refers to the mean score at time 1. A higher score reflects as high occurrence of that variable.

M₂ refers to the mean score at time 2.

*p<0.05

**p<0.001

Table 2.1. Description of the Measuring Instruments and Sub-scales at Time 1 and Time 2

- (c). recreation (6 items, $\alpha = 0.65$) (eg. "At least once a year I take a holiday and do only what is fun");
- (d). ambition (9 items, $\alpha = 0.60$) (eg. "I would like to have got a lot further in my job");
- (e). social stress (5 items, $r = 0.69$) (eg. "There are frequent differences of opinion between me and my colleagues");
- (f). work overload (9 items, $\alpha = 0.69$) (eg. "Sometimes I feel I cannot cope with my work demands" and "In the evening after work I am exhausted").

The original 3-point rating format used by Weyer & Hodapp (1975), was rejected in favour of a 5-point rating scale, ranging from "strongly agree" to "strongly disagree". It was felt that in a longitudinal study, a broader rating format would be more sensitive to more subtle changes in levels of stress, over time. According to Kerlinger (1986), an increase in the possible categories of response, allows for intensity of attitude expression. It is the change in intensity, which is of interest in the present study. Several items were reversed, as indicated by negative factor loadings in the factor analysis conducted by the authors of the scale (Weyer & Hodapp, 1975). Thus a high score was taken to indicate a greater perception of stress, than a low score.

The scales were considered by the developers to display sufficient reliability estimates for group comparisons (Weyer & Hodapp, 1975), and satisfactory validation. In the present study, internal consistency was found to be satisfactory (see Table 2.1), with reliability estimates exceeding 0.80 for most of the sub-scales; and Cronbach's alpha of 0.94, for the overall Perceived Occupational Stress scale. Test-retest reliabilities in the present study range between 0.80 and 0.89 ($p < 0.001$) for the sub-scales, while the overall Perceived Occupational Stress scale was found to yield a highly satisfactory test-retest reliability ($r = 0.90$, $p < 0.001$) (see Table 2.1).

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PROCEDURE

Participation in the study was completely voluntary. Self-report questionnaires were administered to the sample group before their participation in the stress management programme. The self-paced programme was scheduled to end approximately eight weeks after the instructional 2-day work-shop. However, the posttest questionnaires were administered to the sample approximately 6 weeks after the commencement of the programme. Although the posttest evaluation was administered before the end of the scheduled programme, it was not considered to have impacted on the findings of the study, as Ganster, Mayes, Sime & Tharp (1982) suggest that a minimum of 16 hours of instruction is necessary to produce significant change. At least 16 hours of instruction were given during the lecture and workshop phase of the programme.

MEASURING INSTRUMENTS

Stress was determined using Weyer & Hodapp's (1975) 44-item Perceived Occupational Stress scale. This 44-item questionnaire was designed to assess personal threat in occupational situations. It was selected, as it was based on Lazarus' psychological stress model, which was used to define stress in the present study.

The questionnaire includes the following 6 sub-scales, each accompanied by internal reliability coefficients found by the scale developers (Weyer & Hodapp, 1975):

- (a). dissatisfaction with work (8 items, $\alpha = 0.76$) (eg. "If I could I would gladly change jobs" and "I don't feel fulfilled in my job");
- (b). work demands (7 items, $\alpha = 0.67$) (eg. "I am frequently interrupted when trying to complete my work");

comparison had not pursued higher educational qualifications to the same extent. They were all women, in their mid-thirties, with an average time of 4.3 years in their jobs.

Table 1. Description of Demographic Variables by Affectivity Classification.

Variables	Positive Affective		Negative Affective		Total Sample	
	n	%	n	%	N	%
N subjects	7	46.6	5	33.3	15	100
Sex						
-male	4	26.7	0	0.0	6	40.0
-female	3	20.0	5	33.3	9	60.0
Race						
-Black	1	6.7	1	6.7	2	13.3
-Coloured	2	13.3	0	0.0	4	26.7
-White	4	26.7	4	26.7	9	60.0
Language						
-English	6	40.0	4	26.7	13	86.7
-Zulu	1	6.7	0	0.0	1	6.7
-Setswana	0	0.0	1	6.7	1	6.7
Education						
-High school (no matric)	0	0.0	1	6.7	1	6.7
-Matric	1	6.7	2	13.3	5	33.3
-plus Diploma	1	6.7	2	13.3	3	20.0
-Degree	5	33.3	0	0.0	6	40.0
Mean Age (range of scores)	39.1 (25.8-54.4)		34.1 (22.1-43.6)		38.2 (22.1-54.4)	
Mean years in job (range of scores)	3.9 (0.3-9.0)		4.3 (0.3-8.4)		3.5 (0.3-9.0)	
Mean time with company (years) (range of scores)	7.8 (0.3-26.3)		7.3 (0.3-13.5)		6.9 (0.3-26.3)	

DESIGN

The study adopted a quasi-experimental, short-term longitudinal, pretest-posttest design, undertaken in a field setting.

difference (M_D) indicates an increase in the mean from pretest to posttest, while a positive mean difference indicates a decrease in the means from time 1 to time 2.

The matched sample *t*-test was performed on the entire sample population ($N=15$). The concern about the size of the sample, was addressed by Huysamen (1989), where he states that equal sized samples of 15 and over, well justify the use of parametric procedures, such as *t*-tests.

Change in Stress

Hypothesis 1.1 states that at time 2, relative to time 1, the group will exhibit lower stress measures. The results show no significant difference in perceived occupational stress for the sample (see Table 6). Although not significant, certain of the mean differences are worth noting. It appears that over the course of the programme, certain measures of perceived occupational stress were found to increase: work dissatisfaction ($M_D = -0.73$), work demands ($M_D = -1.20$) and social stress ($M_D = -0.60$). Perceptions of work overload were found to be reduced for the sample at time 2 ($M_D = 1.43$; at levels approaching significance: $p = 0.07$); ambition appears to have lowered at time 2 ($M_D = 1.33$), and recreation has decreased, however, only slightly ($M_D = 0.33$).

Change in Coping

Hypothesis 1.2 states that at time 2, relative to time 1, the group will exhibit improved coping skills. However, there was no significant difference in overall coping (problem-focused or emotion-focused). However, the results do show a significant change in the 'escape-avoidance' dimension ($M_D = 1.53$, $p < 0.05$). In other words, subjects at time 2, were less likely to avoid,

Table 5. Pearson's Correlation Coefficients of Perceived Occupational Stress, Ways of Coping, and research variables (N=15)

	Perceived Control	Job Satisfaction	Propensity to leave
Perceived Occupational Stress	-.28	-.12	-.58*
-work dissatisfaction	-.16	-.25	-.31
-work demands	-.16	.03	-.71**
-recreation	-.31	-.07	-.67**
-ambition	.01	-.38	.05
-social stress	-.53*	-.24	-.72**
-overload	-.31	.14	-.47
Problem-focused coping	.31	.55*	.60*
-Confrontive coping	.38	.16	.50*
-Planful Problem-Solving	.23	.52*	.30
Emotion-focused coping	-.10	.40	.06
-Distancing	-.28	.33	-.21
-Self control	-.10	.51*	-.30
-Accepting Responsibility	.02	.35	.01
-Escape-Avoidance	-.32	-.17	-.23
-Positive Reappraisal	.14	.18	.27
-Seeking Social Support	.13	.54*	.54*

*p<0.05

**p<0.01

RESULTS OF THE MATCHED-PAIR T-TEST

In order to establish the effects of the stress management programme on the sample group, the pretest scores at time 1, were compared with the posttest measures at time 2. The group means were tested for significance of difference using a matched-pair t-test analysis, shown in Table 6.

This analysis is based on 'difference' or 'change' scores (D), between time 1 and time 2 (D= time 1 - time 2). A negative mean

Job satisfaction was found to be positively related to problem-focused coping ($r=0.55$; $p<0.05$); planful problem-solving ($r=0.52$; $p<0.05$); self-control ($r=0.51$; $p<0.05$); and seeking social support ($r=0.54$; $p<0.05$). Although moderate, these relations indicate that job satisfaction is related to 'constructive' behavioural and cognitive coping strategies, by attempting to deal with the situation (problem-solving) and rallying support from colleagues in order to do this.

Propensity to leave is significantly related to perceived occupational stress ($r=-0.58$; $p<0.05$); work demands ($r=-0.71$; $p<0.01$); need for recreation ($r=-0.67$; $p<0.01$); social stress ($r=-0.72$; $p<0.01$). Although an inverse relationship is indicated, because propensity to leave is negatively scored, the reverse is true. Thus propensity to leave is associated with increased stress; higher work demands; need for recreation; and higher social stress.

Propensity to leave is also associated with a decrease in problem-focused coping ($r=0.60$; $p<0.05$); confrontive coping ($r=0.50$; $p<0.05$); and a decrease in seeking social support ($r=0.54$; $p<0.05$).

Job satisfaction was found to be positively related to problem-focused coping ($r=0.55$; $p<0.05$); planful problem-solving ($r=0.52$; $p<0.05$); self-control ($r=0.51$; $p<0.05$); and seeking social support ($r=0.54$; $p<0.05$). Although moderate, these relations indicate that job satisfaction is related to 'constructive' behavioural and cognitive coping strategies, by attempting to deal with the situation (problem-solving) and rallying support from colleagues in order to do this.

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Propensity to leave is also associated with a decrease in problem-focused coping ($r=0.60$; $p<0.05$); confrontive coping ($r=0.50$; $p<0.05$); and a decrease in seeking social support ($r=0.54$; $p<0.05$).

Table 4. Pearson's Correlation Coefficients of the relationships between Perceived Occupational Stress and Ways of Coping (N=15)

	POS	W.Dis	W.Dem	Recr	Amb	S/str	O/L
PF coping	-.07	.11	-.11	-.27	.04	-.30	.10
-Confront	.22	.47	.02	-.09	.50	-.05	.26
-Problem Solving	-.46	-.47	-.24	-.41	-.63	-.46	-.24
EF coping	.46	.60*	.28	.24	.23	.38	.54*
-Distance	.31	.28	.31	.19	-.14	.40	.42
-S/contr	.31	.27	.34	.20	-.26	.44	.45
-Accept Respons.	.59*	.68*	.37	.45	.44	.41	.56*
-Escape-Avoidance	.75**	.80**	.48	.64*	.74**	.58*	.58*
-Positive Reappr	-.15	.08	-.26	-.33	-.21	-.04	.00
-Seeking Soc.Sup	.04	.19	-.03	-.14	.15	-.20	.18

POS = Perceived Occupational Stress

Wdis = Work dissatisfaction

Wdem = Work demands

Recr = Recreation

Amb = Ambition

S/str = Social stress

O/L = Overload

*p<0.05

**p<0.01

Correlations between stress, coping and research variables

In a preliminary correlational analysis, establishing the relationships between stress, coping and the research variables at time 1 (see Table 5), it was found that perceived control was significantly inversely related to social stress ($r=-0.53$; $p<0.05$). In other words, those subjects perceiving higher personal control, had a lower experience of social stress.

THE EFFECTIVENESS OF THE STRESS MANAGEMENT PROGRAMME

RESULTS OF CORRELATIONS BETWEEN VARIABLES AT TIME 1 (N=15)

In order to get a sense of the nature of the relationships between the variables before the study, the variables were correlated at time 1. Any reported changes in the variables over time, could thus be understood in the context of pre-existing relationships.

Perceived Occupational Stress and Coping

In a preliminary analysis, measures of stress and coping were correlated. The results of this analysis are shown in Table 4. The results confirm that certain coping styles are related to specific dimensions of occupational stress. Emotion-focused coping strategies were found to be significantly related to occupation stress, while problem-focused coping strategies were not. The clearest relationships emerge with the use of escape-avoidance coping. This sub-scale was found to be significantly related to perceived occupational stress ($r=0.75$; $p<0.01$); work dissatisfaction ($r=0.80$; $p<0.01$); expressed need for recreation ($r=0.64$; $p<0.05$); ambition ($r=0.74$; $p<0.01$); social stress ($r=0.58$; $p<0.05$) and work overload ($r=0.58$; $p<0.05$).

Accepting responsibility was also found to be related to perceived occupational stress ($r=0.59$; $p<0.05$); work dissatisfaction ($r=0.68$; $p<0.05$); and perceptions of overload ($r=0.56$; $p<0.05$).

Table 3: Shapiro & Wilk's W-test for Normality of Change score distributions (N=15)

Variables (Time 1 - Time 2)	W-test	Pr<W
Perceived Occupational Stress	.97	.88
-work dissatisfaction	.93	.29
-work demands	.96	.61
-recreation	.93	.30
-ambition	.96	.70
-social stress	.96	.68
-overload	.89 ¹	.08
WCC		
Problem-focused coping	.96	.62
-Confrontative coping	.91	.12
-Planful Problem-Solving	.98	.95
-Seeking Social Support	.88	.05
Emotion-focused coping	.96	.62
-Distancing	.94	.36
-Self-control	.95	.44
-Accepting Responsibility	.95	.56
-Escape-Avoidance	.90	.10
-Positive Reappraisal	.98	.96
-Seeking Social Support	.88	.05
Perceived Control	.96	.62
Job Satisfaction	.93	.31
Propensity to Leave	.94	.43

¹For the variable sub-scale "overload", one outlying score, was deleted for the purpose of the t-test, as it skewed the data for this variable considerably (variance of the data set with the outlier: 15.5; variance without the outlier: 7.34).

In the independent-sample t-tests, homogeneity of variance between positive and negative affective classification groups was tested for, and in all but one case, was found to satisfy this assumption. In this case, a less powerful non-parametric t-test was used to explore significant differences between the sample means. Sample sizes of the two groups, although not equal, were fairly close (Sample sizes: negative affective = 5; positive affective = 7).

CHAPTER 3

RESULTS

ASSUMPTIONS OF T-TESTS

Underlying the use of *t*-tests, are certain assumptions, which must be met. They are normality of the sampling distribution; homogeneity of variance; and equal sample sizes (Howell, 1992).

Normality of sampling distribution. The normality of the sampling distributions for the change scores between time 1 and time 2, were tested using Shapiro & Wilk's (1965) *W* -statistic (see Table 3), and analysed with the use of Boxplots and Stem-and-Leaf displays (Howell, 1992).

The *W*-statistic must be greater than zero and less than or equal to one, to indicate normality. If a cut-off point of $p < 0.01$ is used, then if the *p* is greater than 0.01, the null hypothesis is rejected, and the data is accepted as normal. The results for tests of normality are presented in Table 3. All of the variables met the assumptions of normality for the matched-sample *t*-tests.

In the matched-sample or repeated measures *t*-test, criteria of equal sample sizes and homogeneity of variance within the group at time 1 and time 2, were inherently satisfied, as the two sets of data are derived from the same sample prior to, and following the programme. In the independent-sample *t*-tests, two independent samples are contrasted. Huysamen (1989) however, points out that the use of samples having the same size would prevent the violation of the homogeneity of variance assumption from appreciably affecting the obtained results.

could be clearly seen, for positive or negative affective subjects.

ASSUMPTIONS

Certain assumptions underlying the use parametric tests have to be met:

Although *t*-tests are robust with regard to departures from underlying assumptions, two major assumptions and one further consideration must be taken into account when using *t* tests for two independent samples (Howell, 1992). The assumptions are: normality of the sampling distribution of differences between means, and homogeneity of variance (equal variance within each group). Furthermore, the sample sizes should be equal.

The results of these analyses are presented in the following section.

Using the D -scores, the null hypothesis becomes the hypothesis that the mean of a population of difference scores (denoted μ_D) equals zero. Since $\mu_D = \mu_1 - \mu_2$, then $H_0: \mu_D = \mu_1 - \mu_2 = 0$

t is defined as

$$t = \frac{\bar{D} - 0}{S_D} = \frac{\bar{D} - 0}{\sqrt{\frac{S_D}{N}}}$$

Where $\bar{D}$ and S_D are the mean and standard deviation of the difference scores and N is the number of difference scores.

The second hypothesis was investigated by using Pearson's correlation coefficients, testing for significant correlations between the change scores in the research variables between time 1 and time 2, and 'positive' and 'negative affectivity'. By using a correlational analysis it was possible to investigate the magnitude and strength of the relationship between affective predispositions and changes in stress, coping, perceived control and the organisational variables from pretest to posttest.

In addition, the sample group was divided into two groups: those scoring higher on positive affectivity; and those scoring higher on negative affectivity. In comparing these groups, t -tests for independent means were used to test for significance of difference at time 1 and time 2, on stress, coping, perceived control, job satisfaction, and propensity to leave.

Matched sample t -tests were used for each of the positive and negative affective sub-groups, to test for a significant difference between time 1 and time 2 on the research variables. In this way, the effects of the stress management programme

'Distancing', and the other sub-scales were retained for the analyses, however taking this factor into consideration.

STATISTICAL ANALYSIS

The aim of the present study is to determine the effectiveness of a stress management programme as measured by changes in the research variables. Pearson's correlation coefficients were used in a preliminary analysis to establish patterns of relationships between the variables, before the programme, at time 1. In order to establish whether any significant changes had taken place over the period of the stress management programme, *t*-tests were used.

T-TESTS FOR DEPENDENT/MATCHED SAMPLES

Matched-pair *t*-tests were used to investigate changes in the mean scores of the research variables between pre- and posttest variables (Hypothesis 1). Because in this case, a single sample group is measured at time 1 and time 2, scores can be matched or paired for each respondent. The matched-sample *t*-test, as it is also known (Howell, 1992), is then used to test for significance of difference in means of subjects before and after the intervention.

Between the group mean for time 1, and that of time 2, a difference score is created. Although Howell (1992) points out that it seems most obvious to view the data as representing two samples of scores, it is possible and convenient, to transform the data into one set of scores. The difference scores between group means for time 1 and time 2, represented by '*D*', can be thought of as the degree of improvement or decrement between the testing times (Howell, 1992).

quit. Conversely, a high score indicates a low intention to leave.

The original application of this scale was in the hospital setting, yielding a Spearman-Brown internal reliability coefficient of 0.81 for a sample of 156 nurses. Rousseau's (1978) application of this scale to the organisational setting yielded an alpha coefficient of 0.71 and test-retest reliability of 0.63 over three months. Bluen (1986), in his application of this scale to a South African sample, observed acceptable internal reliability (Cronbach's alpha 0.72) but a less satisfactory test-retest reliability over a six month period (0.57, $p < 0.001$).

Lyons (1971) reported a significant relationship between Propensity to Leave scale, and role clarity ($r = -0.27$, $p < 0.01$). Rousseau (1978) found that length of job tenure correlated -0.19 with Propensity to Leave, and other statistically significant relationships ($p < 0.05$) with perceived task and role characteristics were observed. In this study, the Lyons (1971) Propensity to Leave scale was found to yield acceptable internal reliability of 0.75 (see Table 2.2), and test-retest reliability (0.80, $p < 0.001$).

Cronbach's alpha reliability coefficients, and test-retest reliabilities for the measuring instruments used at time 1 and time 2, are presented in Tables 2.1 and 2.2. Although most of the scales and sub-scales were found to be reliable, in some cases (for instance, 'ambition', 'confrontive coping', 'distancing', 'self-controlling'), the internal consistency reliability was found to fall below the acceptable criterion of 0.70. The 'Distancing' sub-scale was found to display particularly low reliability. However, the inclusion of 'Distancing' was found not to contaminate results. Therefore

Job satisfaction: Positive affective subjects scored significantly higher on job satisfaction ($t=-2.62$; $p<0.05$), than did negative affective after the stress management programme. There is a decrease in job satisfaction for the negative affectivity group from time 1 to time 2, and an increase in job satisfaction for the positive affective group at time 2, accounting for the difference between means at time 2.

Propensity to leave: There were no significant differences between positive and negative affective subjects before or after the programme. Propensity to leave is, however, slightly increased for both groups.

SUMMARY OF FINDINGS

These results will be discussed in the following section. A summary of findings displaying directions of change in means from pretest to posttest, is shown in Table 10.

Table 9.3 Independent sample *t*-tests for differences in mean measures of perceptions of control, job satisfaction, and propensity to leave, between positive (*n*=7) and negative (*n*=5) affective subjects, at time 1 and time 2

Variables	TIME	Pos Affectiv (<i>n</i> =7)		Neg Affectiv (<i>n</i> =5)		<i>t</i>
		M	SD	M	SD	
Perceived Control	1	57.86	8.03	51.60	11.52	-1.12
	2	61.71	3.95	53.00	3.39	-3.99**
Job Satisfaction	1	22.86	4.91	20.20	3.27	-1.05
	2	25.43	4.76	16.80	6.72	-2.62*
Propensity to Leave	1	8.57	2.15	7.80	3.34	-0.49
	2	8.14	3.24	6.20	2.95	-1.06

**p*<0.05

***p*<0.01

Affectivity and satisfaction, control and propensity to leave

Table 9.3 indicates differences in mean measures of perceived control, job satisfaction, and propensity to leave, between positive and negative affective subjects, prior to, and following the programme.

Perceived Control: The results show that positive affective subjects perceive significantly more control (*t*=-3.99; *p*<0.01) at time 2, than negative affective subjects. At time 1, prior to the programme, although positive affective subjects perceived higher personal control, the difference was not significant, indicating that perhaps the 'gap' between the mean scores has increased between these two groups of subjects following the stress management programme.

Table 9.2 Independent sample t-tests for differences in mean measures of coping, between positive (n=7) and negative (n=5) affective subjects, at time 1 and time 2

Variables	TIME	Pos Affectiv (n=7)		Neg Affectiv (n=5)		t
		M	SD	M	SD	
PFC ¹	1	44.42	6.58	43.00	9.90	-0.30
	2	44.57	6.02	40.20	7.09	-1.15
-Confrontive coping	1	11.71	2.43	13.20	3.96	0.81
	2	11.57	1.81	11.40	2.30	-0.14
-Problem-Solving	1	18.71	2.06	14.60	2.19	-3.33**
	2	19.00	2.23	14.40	3.43	-2.83**
-Seeking Social Support	1	14.00	3.46	15.20	5.50	0.47
	2	14.00	3.11	14.40	3.78	0.20
EFC ²	1	83.28	16.02	89.00	15.43	0.62
	2	83.71	13.45	87.60	17.01	0.44
-Distancing	1	11.86	2.67	11.60	1.82	-0.19
	2	12.57	4.31	13.00	4.18	0.17
-Self-control	1	17.29	4.68	15.40	1.67	-0.85
	2	16.57	4.65	16.00	2.00	-0.26
-Accepting Responsibility	1	10.29	2.81	11.60	3.04	0.77
	2	10.00	2.24	10.60	1.67	0.50
-Escape-Avoidance	1	10.71	1.60	19.80	2.68	7.37**
	2	10.71	1.60	17.20	4.14	3.32*
-Positive Reappraisal	1	19.14	3.08	15.40	6.02	-1.43
	2	19.86	3.43	16.40	5.86	-1.29
-Seeking Social Support	1	14.00	3.46	15.20	5.50	0.47
	2	14.00	3.11	14.40	3.78	0.20

*p<0.05

**p<0.01

¹ PFC refers to Problem-focussed coping

² EFC refers to Emotion-focussed coping

Affectivity and coping

Table 9.2 shows that positive affective people reported a significantly higher use of planful problem-solving strategies to cope with stress, than did negative affective subjects at both time 1 ($t=-3.33$; $p<0.01$) and at time 2, ($t=-2.83$; $p<0.01$).

At time 2, the assumption of homogeneity of variance for escape-avoidance was rejected, thus a non-parametric t -test was used to derive the t -statistic, where variance is unequal.

Negative affective subjects reported a significantly higher use of escape-avoidance strategies to cope with stress, than did positive affective subjects at both time 1 ($t=7.37$; $p<0.01$) and at time 2, ($t=3.32$; $p<0.05$). These two sets of results indicate a very different coping style, associated with mood disposition.

stress measures at both time 1 and time 2 (Table 9.1). However many of these differences are not statistically significant. The difference between positive and negative affective groups, was however significant for perceived occupational stress, pretest ($t=2.35$; $p<0.05$) and posttest ($t=2.09$; $p<0.05$); work dissatisfaction, pretest ($t=2.86$; $p<0.01$) and posttest ($t=2.74$; $p<0.05$) and ambition, pretest ($t=2.94$; $p<0.01$) and posttest ($t=2.43$; $p<0.05$).

Table 9.1 Independent sample *t*-tests for differences in mean measures of stress, between positive ($n=7$) and negative ($n=5$) affective subjects, at time 1 and time 2

Variables	TIME	Pos Affectiv ($n=7$)		Neg Affectivity ($n=5$)		t
		M	SD	M	SD	
Perceived Occup. Stress	1	110.43	24.44	144.20	24.75	2.35*
	2	111.71	28.16	146.00	27.78	2.09*
-work dissat.	1	15.00	3.83	22.80	5.67	2.86**
	2	15.14	4.53	24.20	6.98	2.74*
-work demands	1	19.14	6.79	23.80	6.30	1.21
	2	21.29	7.99	24.80	5.97	0.83
-recreation	1	14.43	4.08	20.00	6.60	1.82
	2	14.43	5.38	19.80	4.71	1.79
-ambition	1	27.14	2.48	33.40	4.88	2.94**
	2	25.71	3.25	31.80	5.45	2.43*
-social stress	1	10.86	3.24	14.00	3.32	1.64
	2	11.57	4.31	16.60	3.78	2.08
-overload	1	23.87	8.07	30.20	5.80	1.49
	2	23.57	8.42	28.80	6.61	1.15

* $p<0.05$

** $p<0.01$

Table 8 shows that negative affectivity was found to be related to a change (increase) in work dissatisfaction ($r=0.70$; $p<0.01$) and change (decrease) in the magnitude of ambition ($r=0.57$; $p<0.05$). In terms of coping strategies, negative affectivity is significantly related to a change (decrease) in confrontive styles of coping ($r=0.68$; $p<0.01$). Although not significant, there is some evidence of a change (decrease) in the use of problem-solving techniques ($r=0.47$; $p<0.08$) for high negative affective individuals. In other words, the results indicate that high negative affective subjects experience greater change in dissatisfaction, ambition and their use of confrontive coping. Overall, negative affective individuals were more likely to show some change in variables from time 1 to time 2. However, most often, these relations were not found to be significant.

Positive affectivity was not significantly related to a change in variables from time 1 to time 2. However, although not significant, positive affectivity was found to be related to less change in most of the perceived occupational stress scores, and the coping strategies listed in the checklist. Positive affectivity was also associated with a change (increase) in perceived control ($r=0.47$; $p<0.07$) from pretest to posttest.

T-TESTS FOR INDEPENDENT SAMPLES

t-tests for independent samples were conducted to test for differences in means between those high in positive or negative affectivity, before and after the programme.

Affectivity and stress

In comparing the means of those exhibiting a higher score in negative affectivity ($n=5$) and those scoring higher on positive affectivity ($n=7$), it is clear from the results that the negative affective group scored consistently higher for all

reflects a limited change associated with high mood predisposition, or conversely, a greater change associated with a low affectivity score. In other words, an inverse relationship suggests that the higher the affectivity, the less likely it is that the programme will affect a change in the research variable. Although the correlational analysis was useful in determining the magnitude of change, the direction of change had to be assessed by comparing the means of the variables pre- and posttest (see Table 10 for summary of changes between time 1 and time 2).

Table 8 Pearson's Correlations Coefficients of Affectivity, with Difference Scores between Time 1 and Time 2 (N=15)

Variables (Mean Differences between Time 1 and Time 2).	Positive Affectivity	Negative Affectivity
Perceived Occupational Stress	-0.13	0.39
-work dissatisfaction	-0.27	0.70**
-work demands	-0.30	0.42
-recreation	-0.08	0.05
-ambition	-0.13	0.57*
-social stress	-0.42	0.39
-overload	0.05	-0.11
WCQ		
Problem-focussed coping	-0.05	0.34
-Confrontive coping	0.01	0.68**
-Planful Problem-Solving	-0.24	0.47
-Seeking Social Support	-0.05	0.19
Emotion-focussed coping	0.10	0.22
-Distancing	-0.48	0.16
-Self-control	0.13	-0.36
-Accepting Responsibility	-0.16	0.37
-Escape-Avoidance	-0.46	0.39
-Positive Reappraisal	0.20	0.22
-Seeking Social Support	-0.05	0.19
Perceived Control	0.47	0.31
Job Satisfaction	0.10	0.09
Propensity to Leave	-0.08	0.07

*p<0.05

**p<0.01

Although the evidence is not conclusive the direction of the correlational relationships suggest that positive affectivity is positively associated with problem-focused coping ($r=0.35$; not significant), and negatively associated with emotion-focused coping ($r=-0.22$; not significant). Negative affectivity is positively associated with emotion-focused coping ($r=0.22$; not significant).

Regarding work attitudes, positive affectivity is significantly related to job satisfaction ($r=0.52$; $p<0.05$) and decreased propensity to leave ($r=0.55$; $p<0.05$). In other words, positive affective people are more likely to experience higher job satisfaction, and are less likely to consider leaving the organisation.

Overall, the results of correlations of negativity with work attitudes were weak and non-significant.

PEARSONS CORRELATIONS OF AFFECTIVITY AND CHANGE SCORES

Table 8 displays the results of a second correlational analysis, investigating the relationship between affectivity, and the change in means between time 1 and time 2 ($N=15$). Absolute values of the change scores were used to assess the magnitude of change between time 1 and time 2. The aim of this analysis was to see whether the difference in the means of the research variables (stress, coping, perceived control, job satisfaction and propensity to leave) between time 1 and time 2, were related to positive or negative mood predispositions.

This analysis clarifies whether the changes in mean from pretest to posttest (ie due to the programme) are enhanced or inhibited by positive or negative predisposition. A positive relationship indicates that the greater the mood affectivity, the greater the change in the mean for that variable. A negative relationship

The results show a strong pattern of influence between positive affectivity and perceived occupational stress ($r=-0.74$; $p<0.01$); and between negative affectivity and perceived occupational stress ($r=0.61$; $p<0.05$). This result clearly demonstrates the different ways in which positive and negative affective subjects perceive events in their work environments, and their interpretations of these events as threatening. Subjects scoring high on positive affectivity, tend to perceive lower work demands ($r=-0.55$; $p<0.05$); lower work dissatisfaction ($r=-0.71$; $p<0.01$); lower need for recreation ($r=-0.70$; $p<0.01$); lower social stress ($r=-0.71$; $p<0.01$) and less overload ($r=-0.58$; $p<0.05$).

Subjects scoring higher on negative affectivity tend to perceive significantly higher occupational stress ($r=0.61$; $p<0.01$); higher work dissatisfaction ($r=0.63$; $p<0.01$); and overload ($r=0.57$; $p<0.05$). There is also a significant positive relationship between negative affectivity and ambition ($r=0.60$; $p<0.05$).

Patterns of relationships between positive and negative affectivity and coping processes are not nearly as clear as the relationship between affectivity and stress. The results of the correlational analysis show that while positive affectivity is related to planful problem-solving ($r=0.58$; $p<0.05$); negative affective people are clearly not oriented towards problem-solving, and may in fact be oriented away from problem-solving ($r=-0.49$) (although this result was not significant).

Negative affectivity has a strong positive correlation with escape-avoidance coping ($r=0.79$; $p<0.01$); while positive affectivity is inversely related to escape-avoidance ($r=0.61$; $p<0.05$).

PEARSON'S CORRELATIONS OF AFFECTIVITY AND VARIABLES AT TIME 1

In order to establish a pattern of relationships between affectivity and stress, coping, perceived control, job satisfaction and propensity to leave, a correlational analysis was performed on variables at time 1, for the entire sample, shown in Table 7.

Table 7 Pearson's Correlation Coefficients of Affectivity with the research variables at Time 1 (N=15)

Variables	Positive Affectivity	Negative Affectivity
Perceived Occupational Stress	-0.74**	0.61*
-work dissatisfaction	-0.71**	0.63**
-work demands	-0.55*	0.46
-recreation	-0.70**	0.46
-ambition	-0.48	0.60*
-social stress	-0.71**	0.30
-overload	-0.58*	0.57*
WCQ		
Problem-focussed coping	0.35	0.09
-Confrontive coping	0.13	0.42
-Planful Problem-Solving	0.58*	-0.49
-Seeking Social Support	0.14	0.21
Emotion-focussed coping	-0.22	0.22
-Distancing	-0.23	-0.03
-Self-control	-0.04	-0.17
-Accepting Responsibility	-0.17	0.25
-Escape-Avoidance	-0.61*	0.79**
-Positive Reappraisal	0.10	-0.37
-Seeking Social Support	0.14	0.21
Perceived Control	0.48	-0.29
Job Satisfaction	0.52*	-0.11
Propensity to Leave ¹	0.55*	-0.10

*p<0.05

**p<0.01

¹ Propensity to leave is negatively scored. A high score indicates a low intention to leave.

Table 6 Matched sample t-tests for time 1 and time 2 (N=15)

Variable	N	Mean(D)	SD	t
Perceived Occupational Stress	15	-0.20	12.58	-0.06
-work dissatisfaction	15	-0.73	3.67	-0.77
-work demands	15	-1.20	3.03	-1.53
-recreation	15	0.33	3.24	0.40
-ambition	15	1.33	3.15	1.64
-social stress	15	-0.60	2.92	-0.80
-overload	14	1.43	2.71	1.97
WCQ				
Problem-focussed coping	15	1.00	4.68	0.83
-Confrontive coping	15	0.73	2.05	1.38
-Planful Problem-Solving	15	0.00	2.14	0.00
-Seeking Social Support	15	0.27	2.89	0.36
Emotion-focussed coping	15	2.20	6.13	1.39
-Distancing	15	-0.60	2.82	-0.82
-Self-control	15	0.20	1.86	0.42
-Accepting Responsibility	15	0.47	2.53	0.71
-Escape-Avoidance	15	1.53	2.45	2.43*
-Positive Reappraisal	15	-0.27	2.09	-0.50
-Seeking Social Support	15	0.27	2.89	0.36
Perceived Control	15	-1.40	8.37	-0.65
Job Satisfaction	15	0.13	6.43	0.08
Propensity to Leave	15	0.67	1.88	1.38

*p<0.05

POSITIVE AND NEGATIVE AFFECTIVITY

The second objective of the present study was to discover if there are there significant differences between positive and negative affective subjects, with regard to the research variables, at time 2, relative to time 1. This was investigated by correlational analysis and t-tests for independent samples.

or more likely to approach or acknowledge their problems, than before the stress management programme at time 1.

Although non-significant, it appears that some change has occurred in the means reported over the duration of the programme. Certain of these are worth noting: After the programme, there is a slight decrease in problem-focussed coping strategies ($M_b = 1.00$), and confrontative coping ($M_b = 0.73$). A decrease in emotion-focused coping styles ($M_b = 2.20$) is also detected, however this is not significant. There appears to be very little difference between pretest and posttest, in most of the coping sub-scales, for the group as a whole.

Perceived control, Job Satisfaction and Propensity to Leave

Hypotheses 1.3 to 1.5 state that at time 2, relative to time 1, the group will exhibit increased perception of control, greater job satisfaction and lower propensity to leave. However, no significant differences in means were found for perceived control, job satisfaction or propensity to leave. A cursory examination of the mean differences before and after the programme, hints at an increase in perceptions of control ($M_b = -1.40$), but no change in job satisfaction. A decrease in the mean score for propensity to leave ($M_b = 0.67$) indicates an increase in turnover intention (since a low score reflects a high propensity to leave).

Interventions are designed to help individuals reduce individual distress, and not to help clients comply with impossible or unreasonable work demands, nor are they designed to solve organisational problems (Reynolds & Shapiro, 1991).

The literature on coping, cognitive and behavioural control coping also appears to presume to some extent a favourable environment (Leiter, 1991). An assertive approach to job-related problems in the absence of a supportive relationship with one's supervisor and associated organisational resources, may only lead to additional stressful incidents. This analysis indicates that individual coping behaviours may be quite salient to addressing occupational stressors, but only if these coping efforts are supported by colleagues (Leiter, 1991).

Another way of explaining the findings above, relates to the findings of those involved in research on work attitudes. Previous studies have shown that work attitudes are relatively stable over time (Staw & Ross, 1985; Cropanzano, James & Konovsky, 1993). In longitudinal research, Staw & Ross (1985) found that job satisfaction scores remain correlated over time, and that this can occur even when individuals change occupations or employers. Newton & Keenan (1985) found that although changes do occur as a result of the environment, the rank order among individuals tends to remain somewhat stable. This relative stability has been attributed to certain personality dispositions (Cropanzano, James & Konovsky, 1993).

POSITIVE AFFECTIVITY AND NEGATIVE AFFECTIVITY

The second objective of the present study was exploratory, with the aim of discovering whether positive and negative affectivity influences the extent to which employees benefit from the programme.

interaction between individuals and their working environment, then there are two ways of reducing stress: by reducing or removing environmental stressors, or by changing the way in which individuals cope. However, the stress management literature and research is concerned with individually-targeted interventions. Typically, methods draw heavily on anxiety management, including relaxation exercises, biofeedback, and cognitive reappraisal (Reynolds & Shapiro, 1991).

The ethical problems of selecting the individual employee as the target for change, have been highlighted by Ganster, Mayes, Sime, & Tharp (1982). They suggest that individual level interventions imply that the problem resides primarily with the individual, that the responsibility for change lies with the workers, and that organisations are only responsible for providing the services which assist the employees to change. No attempt is made to remove the stressors from the environment, and thus the interventions can be seen as an attempt to increase employee tolerance of noxious or unacceptable job characteristics. A more ethical form of intervention is to change environmental characteristics which contribute to workers' experiences of stress. Stress management programmes should therefore be used in situations where environmental stressors cannot be modified, or in conjunction with the removal or reduction of environmental stressors from the workplace (Ganster et al, 1982).

One of the key assumptions in the stress intervention literature is that stress has negative consequences for individuals and organisations. Yet empirical evaluation studies are routinely focused on the individual-level change (Burke, 1993). Research on stress management programmes, while reporting statistical significance of individual-level changes, often fail to reach the level of clinical significance (Reynolds & Shapiro, 1991).

Several explanations exist to account for these findings. Firstly, according to the literature, it takes time to change attitudes and behaviour. It is possible that the period given to change, between pre- and posttest, was inadequate to show results.

According to Ellis (1978), changing one's way of viewing events, and breaking destructive patterns of behaviour, takes time and practice. The stress management programme under review, focused to a large extent on challenging one's own unrealistic expectations of what one can be expected to achieve, and managing one's resources more effectively. However, any form of attitudinal change takes time to master, as does the practice of new behaviours. The fact that post-test scores do not indicate significant changes, may indicate that at time 2, the individual is yet to readjust attitudes and behaviour.

Secondly, and a more likely explanation is, that the economic goals of the organisation often take precedence over personal health and welfare objectives (Cullen & Sandberg, 1987). This means that in spite of training to deal with stress, the work demands remain unchanged. This is shown in the post-test scores, where employees do not experience change in their perceptions of their work demand, and levels of social stress, is still a reality of their daily work pressures.

The recent development in the psychological literature on occupational stress has been the evaluation of interventions which aim to reduce occupational stress (Reynolds & Shapiro (1991). Lack of consistent findings in stress management research has been ascribed to the inadequate use of controls, lack of follow-up, and inadequacy of outcome measures. However, Reynolds & Shapiro (1991) suggest that the assumptions of stress management interventions need some addressing. If stress is defined in the interactionist framework as the product of the

taken of the pretest correlational findings, then perhaps it may be said that job satisfaction is derived from constructive forms of coping (Planful problem-solving, self control and social support); while stressors experienced in the workplace are related to expressed intentions to leave.

Propensity to leave

Hypothesis 1.5 stated that the group, at time 2, relative to time 1, would exhibit lower propensity to leave the organisation.

No significant change was observed in propensity to leave after the programme. On closer inspection of the mean scores at pretest and posttest, a slight increase was observed.

Furthermore, upon follow up with the company, it was discovered that at least two employees had left the company soon after the programme.

This may be explained by enduring levels of stress after the programme, as Fang & Baba (1993) have found stress to be directly related to intentions to quit. The correlational analysis at time 1 also revealed a strong positive relationship between work stress and propensity to leave. Higgins (1986) found that even though participants of stress management programmes reported lower stress, the programmes were not effective in reducing withdrawal behaviour of the participants. Leaving the organisation is the most extreme form of withdrawal behaviour (Higgins, 1986).

The overall evidence suggests that the stress management programme was not effective in reducing stress, increasing coping skills, heightening perceptions of control, or improving job satisfaction. Furthermore, propensity to leave was found to increase,

Job Satisfaction

Hypothesis 1.4 stated that the group, at time 2, relative to time 1, would exhibit greater job satisfaction.

No significant change was observed in job satisfaction after the programme. Researchers have consistently found stress to be negatively related to satisfaction (eg. Kirkaldy, 1993; Fang & Baba, 1993; Terry, Nielsen & Perchard, 1993). This is supported from the findings of the correlational analysis at time 1.

Terry, Nielsen & Perchard (1993) found that job satisfaction displayed a higher correlation with supervisor support ($r=.42$; $p<.01$), than with co-worker support ($r=.34$; $p<.01$) in a sample of 153 employees in a public sector organisation. There was some evidence to suggest that the availability of work-related support from the supervisor buffered the negative effects of work stress. Job satisfaction was found to be related to social support in the correlations at time 1 (refer to Table 5), supporting the findings of Terry et al (1993). However, in the study, there was some evidence that interpersonal or social stress in the organisation is fairly high. Furthermore, there seems to be little opportunity in the organisation to develop and rely on social support, possibly due to an overformalised hierarchical structure, which restricts communication between people on different levels of the organisation. This may account for the high interpersonal conflict and presence of social stress. Perhaps the fact that there was little change in job satisfaction, is partly due to this lack of supervisory or social support in the organisation, and social stress.

The finding of Terry, Nielsen & Perchard (1993), that the experience of quantitative work overload did not have a significant main effect on job satisfaction, is also consistent with the findings of this study. If a broader perspective is

emotion at any given phase of a stressful encounter. These reflect individual differences in cognitive appraisal and coping.

Perceived control

Hypothesis 1.3 stated that the group, at time 2, relative to time 1, would exhibit increased perception of control.

No significant change was observed in perceived control after the programme. However, there was some indication, in directly comparing pre- and posttest means, that perceived control was slightly increased. In the literature, it has been suggested, that people tend to use more problem-focused coping in situations appraised as controllable; and more emotion-focused coping in situations where it was believed that few options exist to affect the outcome (Folkman & Lazarus, 1985). Findings have been consistent with this theory. Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen (1986) found that where subjects appraised encounters as changeable, subjects accepted more responsibility and used more confrontive coping, planful problem-solving, and positive reappraisal. However, in situations they appraised as uncontrollable, or having to be accepted, subjects used more distancing and escape-avoidance (Roth & Cohan, 1986).

The link established in the literature between perceived control and constructive coping behaviours is evident in the present study, as in the posttest assessment, subjects were found to experience a mean increase in perceived control and a decrease in avoidance coping.

is viewed, not as a situation-transcending character trait, but following the established perspective of Lazarus & Folkman (1985) then coping is the implementation of strategies designed to help the individual deal with stressors in the environment, and the impact of coping will only be evident when the person is undergoing stress or strain. Thus evidence of change in coping strategies, may not be immediate, as they may take time to implement in complex, demanding environments (Koeske, Kirk & Koeske, 1993). This may account for a general change in orientation towards coping, rather than obvious improvements in specific coping strategies, following the programme.

Coping is a complex process. Folkman & Lazarus (1985) found in their study of coping with mid-term exams, that students used combinations of most of the available forms of problem-focused coping and emotion-focused coping at every stage of the exam. Different forms of coping were salient during anticipation and waiting stages. Problem-focused coping was more salient in the former, and distancing more prominent during the latter (Folkman & Lazarus, 1985). According to Folkman & Lazarus (1988) it is tempting to argue that planful problem-solving is an inherently adaptive form of coping and confrontive coping and distancing are inherently maladaptive. However, it is important to consider that the adaptive value of a coping process often depends on the context. Therefore repeated attempts at planful problem-solving may be maladaptive in circumstances where nothing can be done to alter the outcome. Ultimately coping is difficult to evaluate, as the appropriateness of the coping strategy can only be evaluated in the context of the situation.

People cope in complex ways (Folkman & Lazarus, 1985). Furthermore, according to Folkman & Lazarus (1985), at any given phase of a stressful encounter, people are likely to experience seemingly contradictory states of mind and emotion. According to Folkman & Lazarus (1985), there are substantial differences in

Although avoidant strategies seem useful in that they may reduce stress and prevent anxiety from becoming crippling (Roth & Cohen, 1986), avoidance is unsustainable in the long-term (Folkman & Lazarus, 1988). Approach strategies allow for appropriate action and the possibility for noticing and taking advantage of changes in a situation that might make it more controllable (Roth & Cohen, 1986).

Koeske, Kirk & Koeske (1993) found that evidence for a beneficial role for avoidance strategies was lacking or minimal. Workers who predominantly or exclusively relied on avoidant strategies showed significantly poorer outcomes, allowing a process of strain and poor morale to be set in motion, which worsens as the job proceeds (Koeske, Kirk & Koeske, 1993). Leiter (1991) also found that workers who used escapist coping strategies tended to experience greater levels of emotional exhaustion, and an ineffective means of avoiding burnout. This perspective finds support in the correlational analysis in the present study at time 1, where escape-avoidance coping was found to be significantly related to perceived occupational stress, work dissatisfaction, expressed need for recreation, social stress and work overload. Thus the orientation away from avoidance coping, as reported at time 2, is regarded as a positive change in coping strategy.

There was some indication that after the programme, there was a slight decrease in emotion-focused coping styles. This was also seen as a positive trend.

Overall, although coping strategies were not found to change significantly, (with the exception of the orientation away from escape-avoidance), this was not unexpected. According to the definition of coping adopted in the present study, coping is seen as an evolving strategy, rather than a coping disposition or style. According to Koeske, Kirk & Koeske (1993), if coping

the strategies used to reduce stress, and partly from the way in which stress is viewed.

A stressful encounter should be viewed as a dynamic, unfolding process, not as a static, unitary event (Folkman & Lazarus, 1985). The experience of stress does not depend on the events over one or two days, or even weeks. The experience of stress is often chronic (Chen & Spector, 1991), rather than acute, with several demands being made on employees to sustain top performance levels, with ever-increasing workloads. To some extent, while stress management programmes can instruct people how to deal with internal and external pressures, the reality of long-term work demands, seldom changes.

Coping

Hypothesis 1.2 stated that the group, at time 2, relative to time 1, would exhibit improved coping skills.

In the preliminary analysis, measures of stress and coping were correlated, confirming that certain coping styles are related to specific dimensions of occupational stress. Emotion-focused coping strategies were found to be significantly related to occupation stress, while problem-focused coping strategies were not. However, in the pretest-posttest analysis, there was no significant difference in overall coping (problem-focused or emotion-focused).

There was a significant change in the 'escape-avoidance' subscale. The results show that individuals after the programme were less likely to attempt to avoid, or escape from their problems, than before the stress management programme. Borrowing from Roth & Cohen's (1986) framework, 'approach' and 'avoidance' are "simply metaphors for cognitive and emotional activity that is oriented either towards or away from threat" (p. 813).

Stress

Hypothesis 1.1 stated that the group, at time 2, relative to time 1, would exhibit lower stress.

The results of the study show no significant difference in perceived occupational stress for the participants in the programme. This finding is not totally inconsistent with findings of previous research. Although Higgins (1986) found that participants in two different stress management programmes had lower post-treatment scores than non-participants on measures of psychological stress, emotional exhaustion, and personal strain, other studies have found that stress management techniques have not been convincingly successful in reducing stress (eg. Burke, 1993). Murphy (1984) reported a trend towards baseline levels in the weeks following stress management programmes.

There was some indication from the results, that perceptions of work overload were reduced following the programme. This is consistent with the philosophy of stress management, which, following Burke (1993), seeks to help individuals assess demands in terms of their competencies, and thereby make the stimuli seem less overwhelming.

Another interesting finding was that ambition appears to have decreased at time 2, perhaps indicating that due to the focus of the programme on goal-setting and planning, subjects had become little more realistic about their goals after the programme (Burke, 1993).

The success of the programme under review, in terms of addressing stress, was disappointing, but predictable. This lack of convincing success of stress management programmes in the literature, research and the present study, may stem partly from

CHAPTER 4

DISCUSSION OF RESULTS

The purpose of the present study was to evaluate the effectiveness of a stress management programme by examining stress, coping, perception of control, job satisfaction and propensity to leave, prior to, and following, the programme intervention.

The second aim of this study was to determine whether, over the course of the intervention, there would be significant differences for those demonstrating negative or positive affective predispositions.

In the following section, the results of the study are discussed in relation to the literature, together with the theoretical and practical implications of the findings. The limitations of the study are considered, and directions for future research outlined.

THE EFFICACY OF THE STRESS MANAGEMENT PROGRAMME

According to Hiebert (1988), a stress management programme should: improve the employee's problem-focused functioning by skills development and training; increase resources such as problem-solving skills; improve the employee's emotion-focused coping by tempering physiological, cognitive and behavioural reactions to stressors; and provide didactic information regarding stress reactions, and increase the employee's sense of personal control over their lives.

Table 10 Symbolic representation of directions of change in means from pretest to posstest for the entire sample (N=15); for the positive affective sub-group (n=7), and the negative affective sub-group (n=5)

Variables	Sample Group N=15	Pos Affec (n=7)	Neg Affec (n=5)
Perceived Occupational Stress	+	+	+
-work dissatisfaction	+	0	+
-work demands	+	-	+
-recreation	-	0	-
-ambition	-	-	-
-social stress	+	+	+
-overload	-	-	-
Problem-focussed coping	-	+	-
-Confrontive coping	-	-	-
-Planful Problem-Solving	0	+	-
-Seeking Social Support	-	0	-
Emotion-focussed coping	-	+	-
-Distancing	+	+	+
-Self-control	-	-	+
-Accepting Responsibility	-	-	-
-Escape-Avoidance	-	0	-
-Positive Reappraisal	+	+	+
-Seeking Social Support	-	0	-
Perceived Control	+	+	+
Job Satisfaction	-	+	-
Propensity to Leave	+	+	+

Where

- + represents an increase from time 1 to time 2
- represents a decrease from time 1 to time 2
- 0 represents no change from time 1 to time 2

Overall the findings of the study suggest that affectivity is predictive of the relationships between variables at time 1 and time 2. However, very little change in variables for positive and negative affective individuals is evident from pretest to posttest. Broadly speaking, this points to the stability of trait affectivity, in spite of the intervention, over the period under review.

THEORETICAL IMPLICATIONS

According to Latack & Havlovic (1992), the task of researchers, is to advance knowledge of coping processes in work organisations. The ultimate goal, is to "provide some order and integration that will advance coping research and spur application of new knowledge to pressing managerial problems" (Latack & Havlovic, 1992, p. 480). The subject of worksite stress management programmes, according to Reynolds & Shapiro (1991) is therefore clearly cited in the domain of organisational psychology. Reynolds & Shapiro (1991) suggest that some of the organisational psychology frameworks would be more appropriate for the conceptualisation of stress management programmes than the prominent 'medical model' of stress management, currently in consultation. The open-systems approach (Katz & Kahn, 1978), or the organisational development approach (the application of behavioural science interventions in order to enhance organisational effectiveness and employee well-being) (Beer & Walton, 1990), may well be suited to the practical problem of reducing occupational stress which may have negative effects on the well-being of employees and on the effectiveness of organisations (Reynolds & Shapiro, 1991). Frameworks such as the technostuctural approach suggest interventions which focus on changes in job design, organisational structure, control, information and reward systems; the human-process approach emphasises the central role of interpersonal and group processes in the functioning of the organisation. However, the specific

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Job Satisfaction

Based on pretest evaluations, positive affectivity was found to be significantly related to job satisfaction before the programme. In other words, positive affective people are more likely to experience higher job satisfaction. This is consistent with earlier findings of Staw & Ross (1985) that positive and negative affectivity may explain variations in employees job satisfaction. Cropanzana, James & Konovsky (1993) also found evidence that trait affectivity may predict job satisfaction, but in a complex fashion.

The results show that there are slight differences in mean measures of job satisfaction between positive and negative affective subjects, prior to, and following the programme. However, in the analysis of pretest and posttest data, it was found that negative affectivity is in fact related to a decrease in job satisfaction between pre- and posttest. Positive affectivity was found to be related to an increase in job satisfaction from pretest to posttest. These results support the findings of Cropanzana et al. (1993), and provide some evidence for the pervasiveness of affectivity in the face of changing environmental conditions.

Propensity to Leave

Positive affectivity was significantly inversely related to propensity to leave (Positive affective employees are less likely to consider leaving the organisation) at time 1. However there were no significant differences between positive and negative affective subjects before or after the programme. Propensity to leave was, however, slightly increased for both groups. The increase in intention to leave had been discussed with regard to the entire sample.

hostile, demanding and distant. Low negative affective individuals are more gregarious, sympathetic, and dependable and are generally more pleasant to be around. They are more dependable and conventional.

While these results find support in the literature, the possibility that negative affectivity may contaminate the reporting of social support, thereby obfuscating the true relations between social support and indices of distress (Elliott, Marmarosh & Pickelman, 1994), cannot be ignored.

Perceptions of Control

The study shows differences in mean measures of perceived control between positive and negative affective subjects, prior to, and following the programme. It was found that positive affective subjects perceive significantly more control after the programme, than negative affective subjects. However, prior to the programme, although positive affective subjects perceived higher personal control, the difference was not significant, indicating that perhaps the 'gap' between the mean scores has increased between these two groups of subjects. This finding was confirmed in the correlational analysis of change scores, where positive affective individuals were found to experience greater change in perceived control. This is consistent with expectations that dispositionally optimistic people would be most likely to recognise opportunities to challenge problems, using problem-solving techniques (Strutton & Lumpkin, 1992).

In the present study, perceived control was found to increase somewhat for both positive and negative affective individuals. This was an expected outcome of the stress management programme, and has been discussed with regard to the entire sample.

the literature as a positive outcome, as confrontive coping has been consistently associated with worsened emotional states (Folkman & Lazarus, 1988). Expression of negative emotion, as reflected in the items, "I express anger to the person who causes the problem", has been found to make the person feel worse (Folkman & Lazarus, 1986). Confrontive coping has been associated with unfavourable encounter outcomes (Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986), and is considered a maladaptive form of problem-focused coping, in that it fails to improve the person-environment fit, and it fails to relieve emotional distress (Folkman & Lazarus, 1988). However, it must be remembered that people cope in complex ways (Folkman & Lazarus, 1985). In many ways current theory is inadequate in explaining how coping mechanisms function (Burke, 1993), and when coping is maladaptive.

It was also found in the present study, that while high positive affective individuals did not seek to increase their social support from time 1 to time 2, high negative affective individuals were found to decrease their seeking of social support from time 1 to time 2.

Social support has been identified in the literature as an important coping resource (Moos, 1992), to be cultivated, maintained, and used (or not used) in different situations. The resource can be drawn upon for emotional support, contributing to the feeling that the individual is cared for, or loved. Tangible support, involving direct assistance, or advice, is also part of social support.

The finding in the present study is consistent with the literature. Low negative affective individuals have been found in previous research to value social relationships, and work harder to maintain them (Watson & Clark, 1984). High negative affective subjects are more independent and non-conformist, more

(1965) analysis of clinician's Q-sorts, typical high negative affective subjects were characterised as introspective and concerned with self as object, tending to ruminate and have persistently preoccupying thoughts, and often engaging in personal fantasy, daydreams and fictional speculation.

Low negative affective people are described as being able to handle anxiety and conflicts, by refusing to recognise their presence. They tend to display repressive or dissociative tendencies, but pride themselves on being rational, and 'objective' (Block, 1965). Thus low negative affective individuals, rather than high negative affective subjects, seem to rely on escape-avoidance. This is contrary to the findings in the present study.

Watson & Clark (1984) suggest that subjects high in negative affectivity are more focused on themselves and their feelings, are more emotionally self-aware, at the same time, however, are highly distressed and poorly adjusted. High negative affectivity individuals may experience higher negative emotion to begin with, but this distress may also increase with excessive rumination over their mistakes (Watson & Clark, 1984).

According to Elliott, Marmarosh & Pickelman (1994), the outcomes of stress in high negative affective people, may be due to a tendency for persons high in negative affectivity to be vigilant to threats from the environment. According to Elliott, Marmarosh & Pickelman (1994), negative affectivity has emerged as a strong predictor of stress appraisal processes and the use of emotion-focused coping in stressful encounters over a five week period.

Negative affectivity was found to be related to a greater change in confrontive coping during participation in the programme. The group means of the high negative affective subjects before and after, reflect a decrease on confrontive coping. This is seen in

higher use of escape-avoidance strategies to cope with stress, than did positive affective subjects at both time 1 and at time 2. These two sets of results indicate a very different coping style, associated with mood disposition. These findings are explored further in the context of the literature.

Planful problem-solving, related to positive affectivity at both pretest and posttest, has also been found to be associated with improved emotional states (Folkman & Lazarus, 1988), and negatively correlated with symptoms (Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986). The explanation offered is that people can begin to feel better when they turn to the problem that is causing distress (Folkman & Lazarus, 1988). An alternative explanation offered by Folkman & Lazarus (1988), is that planful problem-solving can result in an improved person-environment relationship, which should lead to a more favourable cognitive appraisal and hence a more positive emotional response. The latter explanation has empirical support (eg. Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986). This insight fits the data in the present study, as positive affective individuals are believed to seek out the positive experiences, even in challenging situations.

However, the literature on the relationship between affectivity and approach/avoidance of threatening stimuli, is ambiguous (Watson & Clark, 1984). Some theorists argue that escape-avoidance coping is familiar to negative affective subjects, however, others argue that negative affectivity is related to subjects willingness to confront internal psychological stimuli, to analyse their own thoughts and feelings and behaviours. This would indicate approach, rather than avoidance, even if only on a cognitive, rather than a behavioural level. High negative affective subjects have been found to talk more about themselves (Axtell & Cole, 1971) are more self-disclosing in group discussions (Anonor, Vojtisek & Patterson, 1973). In Block's

negative affectivity have a greater need for social approval or affiliation, and are thus more conventional and conformist in their behaviour. They are more cooperative and considerate. High negative affective people are less interested in getting along with their critics. Furthermore, it has been found that in stress situations, individuals high in negative affectivity show a decreased desire for affiliation (Watson & Clark, 1984). This was also found in a study by Elliott, Marmarosh & Pickelman (1994), where social integration was found to be significantly negatively correlated with trait negative affectivity ($r = -.37$; $p < 0.01$) in a sample of 100 subjects.

Coping

Although changes in mean scores by and large have failed to reach significance, certain patterns of relationships between positive and negative affectivity and coping processes do contribute interesting information about ways in which personality is related to coping. The results of the correlational analysis suggest that while positive affectivity is related to planful problem-solving and problem-focused coping; negative affective people are clearly not oriented towards problem-solving, and may in fact be oriented away from problem-solving. Correlational relationships suggest that negative affective people tend to use more emotion-focused coping strategies to deal with stress. In the correlations, negativity affectivity was found to exhibit a strong positive correlation with escape-avoidance coping; while positive affectivity was found to be inversely related to escape-avoidance.

Positive affective people reported a significantly higher use of planful problem-solving strategies to cope with stress, than did negative affective subjects, both before and after the programme. Negative affective subjects reported a significantly

workload, constraints and interpersonal conflict) and job strains (job satisfaction, work anxiety, and somatic symptoms) over the period of a year (Spector & O'Connell, 1994).

Watson & Clark (1984) summarised the findings of 30 studies of stress-related changes in state anxiety as a function of negative affectivity. Changes in psychological or physical stress from baseline levels to after exposure to a stressor, were monitored, and for each of the studies, the magnitude of state anxiety increase was noted for high and low negative affective cases. The results showed that in only five of the 30 studies, that the magnitude of increase was greater for high negative affective subjects.

Thus although the relationship of affective disposition to stress reactivity is not entirely clear, it seems that the stability to trait affectivity is emerging in the literature, and is increasingly being used to explain the findings of stress research. The present research supports the notion of affectivity as a prevailing state, since very little evidence has emerged to suggest that high negative or positive affective individuals are reactive to the stress reduction training.

Another interesting finding to emerge in the study, was that following the programme, the more negative affectivity reported, the less the change in perceptions of social stress. In other words, social stress is more difficult to combat if the people perceiving the stress are negative affective. Social stress refers to stressful relationships with colleagues, where there may be differences of opinion, difficulties in having one's opinion heard, or perhaps receiving little or no acknowledgement from one's colleagues for one's work (Weyer & Rodapp, 1975).

This finding is consistent with the literature on negative affectivity. According to Watson & Clark (1984), people low in

1993), so is it equally unclear to what extent high negative or positive affective people will react to stress reduction training.

Some theorists argue that stress is a highly reactive state. i.e. people high in negative affectivity will always be more sensitive to daily stressors (eg. Marco & Suls, 1993).

Stress reactivity of negative and positive affective people has been investigated in the context of the effects of daily stress on negative mood states within and across days (Marco & Suls, 1993). The short-term stressors are believed to create discrepancies between demands of the situation and resources of the person, thereby causing acute distress. However, the extent to which these short-term stressors are believed to "spillover" across days, is believed to be due to trait affectivity. Marco & Suls (1993) found that problems engendered more distress for high negative affective individuals than for low negative affective people, providing support for the notion that negative affectivity is a reactive state. They conclude that both exposure and reactivity to stressful situations by negative affective individuals may account for their chronic levels of distress (Marco & Suls, 1993).

However, correlations between negative affectivity and mood in non-stressful situations indicate that affectivity may be a prevailing state. The lack of clarity regarding reactivity of high negative affective individuals has been attributed to the stability of the trait affectivity construct.

Affectivity is believed to reflect pervasive emotional states, and self-concepts, which are not expected to change in the face of 'transient' subjective distress. Spector & O'Connell (1994) found that personality could be used as a significant predictor of job stressors (autonomy, role ambiguity, role conflict,

Spector & O'Connell (1994) found that respondents high in negative affectivity would report greater levels of stressors and strains across all measures in a longitudinal study (over one year), than respondents low in negative affectivity.

This is also consistent with Watson & Clark's (1984) findings that high negative affective subjects report more distress across a wide variety of situations, both stress and non-stress, thereby refuting the belief that high negative affective people are similar to low negative affective subjects in the absence of overt stress (Watson & Clark, 1984).

The emerging patterns of association with affectivity seem to indicate that positive and negative affectivity do indeed influence the subjective experience of stress. This was expected at time 1.

However, in comparisons of positive and negative groups, before and after the programme, the negative affective group scored consistently higher for all stress measures. In particular, negative affective individuals perceived consistently higher occupational stress and work dissatisfaction. This finding is interesting in the light of recent debate regarding affectivity. Although it has been established in previous research, that high negative affective individuals report more stress in their daily lives (Watson & Clark, 1984), the temporal dynamics of how high negative affective individuals, in contrast with how low negative affective individuals respond to daily problems is unclear (Marco & Suls, 1993). In other words, the relationship of affectivity to change in the environment is unclear.

This debate is highly relevant to the present study. Just as it is not clear in the literature to what extent high negative affective people are instrumental in creating potentially stressful situations for themselves (Burke, Brief & George,

In the present study it was found that positive and negative affectivity as trait dispositions, sustain differences in perceptions of stress at both pre- and posttest evaluations. Affectivity is seen to influence the outcomes of stress management training in the present study, to the extent that stable differences between negative and positive mood dispositions inform the associations with stress and coping before and after the programme. Subjects provide evidence for this explanation, as positive and negative affective subjects were found to display consistently different work attitudes in terms of stress, coping, perceptions of control, job satisfaction, and propensity to leave, both prior to, and following the programme.

Stress

Before the programme, a strong pattern of influence between positive affectivity and perceived occupational stress, and between negative affectivity and perceived occupational stress was evident. This result clearly demonstrates support for the theory that positive and negative affective subjects have different ways of perceiving events in their work environments, and their interpretation of events as threatening. This is consistent with findings that negative affectivity is a strong predictor of stress appraisal processes (Allott, Marmarosh & Pickelman, 1994).

At time 1, positive affective subjects tended to perceive lower work demands; lower work dissatisfaction; lower need for recreation; lower social stress and less overload (see Table 7). Subjects scoring high on negative affectivity, tended to perceive significantly higher occupational stress; higher work dissatisfaction; and overload. The differences detected in the present study are supported in previous research.

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In stress management research, the question must be asked, "to what extent does the coping measure suggest specific management interventions and training for employees in how to deal with stress on the job?" (Latack & Havlovic, 1992, p. 495).

Researchers have been criticised for focusing on research that does not tie closely to practical organisational problems. Although the field of stress management knowledge cannot be advanced if it driven solely by pragmatic concerns, inherent in coping research, is the ultimate application of this knowledge to reducing the high costs of stress in organisations (Latack & Havlovic, 1992).

Clearly more research is needed to provide answers to these important issues. Watson & Clark (1984) use the fitting expression that 'it is only when one can see the whole elephant, that a clearer and more accurate conception of the animal emerges'.

CHAPTER 5

SUMMARY AND CONCLUSION

In terms of Hiebert's (1988) criteria, a stress management programme should improve the employee's problem-focused functioning by skills development and training; increase resources such as problem-solving skills; improve the employee's emotion-focused coping by tempering physiological, cognitive and behavioural reactions to stressors; and provide didactic information regarding stress reactions, and increase the employee's sense of personal control over their lives.

The main findings of the study were that the stress management programme intervention yielded only small changes in stress, coping, perceived control, job satisfaction and propensity to leave, often contrary to assumed directions.

These findings can be explained in terms of the stability of personality over time, which discourages meaningful changes in peoples' reactions to short-term changes in the environment, or it could be explained by use of individual-level stress management interventions, which are ineffective in reducing chronic stress. From the study, it is not clear which explanation is true.

The data support Tellegen's two factor model of affectivity, finding pervasive and stable individual differences in mood (Watson & Tellegen, 1985). High negative affective individuals are more likely to report distress and dissatisfaction over time regardless of the situation, even in the absence of any overt source of stress (Watson & Clark, 1984).

Gender may also represent a cause for future consideration. Evidence indicates that women may score higher than men on some measures of negative affectivity (Burke, Brief & George, 1993).

Reynolds & Shapiro (1991) identify an urgent need for stress management interventions to overcome the resistance of organisations to considering organisational change. Likewise in stress-management research, researchers appear to have resisted working at an organisational level (Reynolds & Shapiro, 1991). The development of new intervention strategies lies in the research efforts directed at organisation-level interventions, rather than purely an individual-level focus.

broadly. Clearly more research is needed to address the above concerns.

DIRECTIONS FOR FUTURE RESEARCH

Negative affectivity's long-term stability is not as high as that of many other dispositions (Watson & Clark, 1984), and considerable changes in trait level over the course of 6 months are not unusual. Watson & Clark (1984) question the likely causes of these changes. Do they reflect exogenous influences such as major life events, or are changes due to endogenous factors such as maturational effects, changes in attitude or self-concept? More research is required to discover the contributions of these various sources, and to identify other factors differentially related to positive and negative affectivity.

It has been noted that several research issues related to stress management interventions need attention, including a stronger theory base, targeting situational stressors and focusing on relapse prevention (Latack & Hovlovic, 1992). More research on situational stressors is needed to inform the situational interventions which could be applied, and inform the types of strategies which would benefit individuals in that context.

The focus of this study has been to evaluate the effectiveness of a stress management programme, without investigating the specific effects of the different components or techniques of the programme. Reynolds, Taylor & Shapiro (1993) have recognised the need to identify the differential effectiveness of components of stress management training, in order that programmes may be modified to maximise positive outcomes.

additional information from the participants. Alternative qualitative methodologies, such as follow-up interviewing may have given some insight into the way individuals perceived the stress management programme. Perhaps spurious outcomes of the study have resulted from the possibility that the programme was not meeting the needs of the participants from their subjective points of view.

Furthermore, follow-up enquiries lead to the discovery that at least two of the programme participants had left the company. Thus the hypothesised relationships between research variables may have been confounded by circumstances unknown to the researcher. These circumstances may have been discovered in follow-up interviews.

All of the above factors considerably weakened the strength of the design and the generalisability of the results of the study. However, as Latack & Havlovic (1992) indicate, in stress management research, the 'specificity-generalisability' balance may be difficult to achieve due to the importance of understanding specific contextual factors (such as organisational culture) which contribute to job stress and the types of coping strategies used.

Folkman & Lazarus (1988) indicate that the coping measures preclude definite causal statements of the findings, because the data are retrospective, and self-reports may be affected by memory bias. Furthermore, the measurement of coping strategies is not highly developed (Koeske, Kirk & Koeske, 1993). Thus while evidence on how to decrease stress and improve peoples' ability to cope is less than adequate (Latack & Havlovic, 1992), it is difficult to develop sufficiently generic measures which are useful in advancing theoretical understanding (Latack & Havlovic, 1992). This is seen as a limitation, not only in the present study, but as a concern plaguing research on coping more

job classifications, working under the same conditions as those in the experimental group. However, it was not considered feasible to attempt to construct a control group, since the control organisation would most likely differ in too many significant ways from the 'experimental group', to make a comparison realistic.

The size of the sample in this study, is also seen as a limitation. However, in spite of the inadequate sample size, certain important findings were reported. This study should be seen as a basis for future research, investigating the relationships between stable personality dispositions and stress reduction programmes, at the individual and organisational levels.

Although the posttest evaluation was administered before the end of the scheduled programme, which is a limitation, it was during the self-directed work phase, and was considered not to have impacted on the results of the study. Furthermore, the posttest evaluation was still in compliance with Ganster et al's (1982) minimum estimation of 16 hours of instruction, for stress reduction techniques to bring about change.

A follow-up questionnaire was to be administered approximately eight weeks after conclusion of the programme to assess whether the benefits of the programme are relatively enduring, and to reduce any possible test effects. However, due to various postponements and delays of the programme, the remaining time did not allow for this follow-up evaluation. However, since the intervention was not found to impact greatly on the sample, the need for follow-up evaluation was decreased.

Research approach

The measuring instruments used in the present study use a forced-choice format, precluding subjective explanations and

application of these frameworks to the problems of stress management requires further research.

PRACTICAL IMPLICATIONS

Murphy (1984) identifies a clear danger in organisations offering stress management training to workers without attempting to improve work conditions which generate stress. Stress management endeavours require a joint effort of management, workforce and occupational health professionals (Cullen & Sandberg, 1987).

Furthermore, according to Burke (1993), there is a large gap between work stress researchers and practitioners. There is only modest use of work stress findings for intervention and policy development. The extensive use of individual-level stress management interventions is surprising considering the evidence that these interventions have been found to make a difference in only temporarily reducing adverse responses to stress. Clearly, the limits of individual-level interventions must be acknowledged (Burke, 1993).

LIMITATIONS

Design

Since the entire organisation of 27 people, was participating in the programme, it was impossible to draw a control group from the participating organisation. Nor was it possible to randomly allocate participants to experimental and control groups. An attempt was made to identify a control group, equivalent to the experimental group for comparison. It was recognised that certain minimum criteria would have to be met to 'create' an adequate control group. The control group participants should be located in a similar organisation, with the same or a similar

Please mark the option you choose
with an X.

	Strongly Agree	Agree	Cannot Decide	Disagree	Strongly Disagree
23. My salary is adequately in line with my work done.	1	2	3	4	5
24. In my work there is a lot of time wasted which is not my fault.	1	2	3	4	5
25. Sometimes I think that I can't cope with my work.	1	2	3	4	5
26. At work, problems frequently arise which are difficult to overcome.	1	2	3	4	5
27. Tensions between me and my colleagues are burdensome to me.	1	2	3	4	5
28. I don't feel fulfilled by my job.	1	2	3	4	5
29. I would like other working hours.	1	2	3	4	5
30. In my free time I can give my attention to things that I enjoy.	1	2	3	4	5
31. Sometimes the work is beyond me (quantity and/or difficulty).	1	2	3	4	5
32. At least once a year I take a holiday and do only what is fun.	1	2	3	4	5
33. I would like to have got further in my job.	1	2	3	4	5
34. I am satisfied with my relationship with my work colleagues.	1	2	3	4	5
35. I am able to completely relax in my holiday times.	1	2	3	4	5
36. There are frequent differences of opinion between me and my colleagues.	1	2	3	4	5
37. I would like to be promoted in my job.	1	2	3	4	5
38. Sometimes I feel I would like another easier occupation.	1	2	3	4	5
39. During holiday time I have to catch up on many things that I would otherwise not manage to do.	1	2	3	4	5
40. I can voice my opinion on matters concerning my work.	1	2	3	4	5
41. I have ample opportunities to make it to a higher position.	1	2	3	4	5
42. I would like other work colleagues.	1	2	3	4	5
43. I've accomplished most of the things that I have attempted at work.	1	2	3	4	5
44. I've experienced substantial disappointment in my job.	1	2	3	4	5

SECTION C

How do you generally perceive your work? The next set of questions is designed to provide information about the stressful factors related to the work you do. Mark an X over the option you choose for each of the questions below.

	Strongly Agree	Agree	Cannot Decide	Disagree	Strongly Disagree
1. I wish I had more variety in my work	1	2	3	4	5
2. Some things could be improved at my work place.	1	2	3	4	5
3. In the evening after work, I am exhausted	1	2	3	4	5
4. In general, I enjoy my work	1	2	3	4	5
5. It's been a long time since I took a genuine holiday	1	2	3	4	5
6. I sometimes get headaches at work	1	2	3	4	5
7. The daily routine often gets on my nerves	1	2	3	4	5
8. My work is acknowledged by other people	1	2	3	4	5
9. I relax easily in my spare time	1	2	3	4	5
10. I work under strong time pressure	1	2	3	4	5
11. I find it difficult to switch off in the evenings after work	1	2	3	4	5
12. After a time, I often find it difficult to concentrate on my work	1	2	3	4	5
13. Usually I enjoy going to work	1	2	3	4	5
14. I'm often bored with my work	1	2	3	4	5
15. I am adequately compensated for my work	1	2	3	4	5
16. Sometimes I feel that I cannot cope with my work demands	1	2	3	4	5
17. Often I find my work distasteful/unpleasant	1	2	3	4	5
18. I often don't get ahead of my work as much as I would like to	1	2	3	4	5
19. I am frequently interrupted when trying to complete my work	1	2	3	4	5
20. By and large, my work involves many psychological burdens/strains	1	2	3	4	5
21. The work allotted for the day can sometimes not be done in the required time	1	2	3	4	5
22. If I could I would gladly change jobs	1	2	3	4	5

SECTION B

In the following section, we would like you to indicate whether or not the following statements accurately describe the way you generally feel.

Please mark the option you choose with an X.

	TRUE	FALSE
1. It is easy for me to become enthusiastic about the things I am doing.	☐	☐
2. I often find myself worrying about something.	☐	☐
3. I often feel happy and satisfied for no particular reason.	☐	☐
4. My feelings are hurt rather easily.	☐	☐
5. I live a very interesting life.	☐	☐
6. Often I get irritated at little annoyances.	☐	☐
7. Every day I do things that are fun.	☐	☐
8. I suffer from nervousness.	☐	☐
9. I usually find ways to liven up my day.	☐	☐
10. My mood often goes up and down.	☐	☐
11. Most days I have real moments of real fun or joy.	☐	☐
12. I sometimes feel 'just miserable' for no good reason.	☐	☐
13. I often feel sort of lucky for no special reason.	☐	☐
14. I am easily startled by things that happen unexpectedly.	☐	☐
15. Every day interesting things happen to me.	☐	☐
16. I often lose sleep over my worries.	☐	☐
17. In my spare time I usually find something interesting to do.	☐	☐
18. Minor setbacks sometimes irritate me too much.	☐	☐
19. For me life is a great adventure.	☐	☐
20. There are days when I am 'on edge' all of the time.	☐	☐
21. I always seem to have something pleasant to look forward to.	☐	☐
22. I am too sensitive for my own good.	☐	☐

SECTION A: BIOGRAPHICAL DETAILS

1. SURNAME

INITIALS

2. How old are you?

years

months

3. What is your sex? (Mark with an X)

MALE

FEMALE

4. What is your population group? (Mark with an X)

BLACK

COLOURED

WHITE

INDIAN

ASIAN

OTHER

5. What is your home language?

6. Education: What is your highest level of education achieved?

High School
(no Matric)

Matric (or
equivalent)

Matric plus diploma

Matric plus degree

7. How long have you been in your present job?

years

months

8. How long have you been with your company?

years

months

9. What is your job title?



UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Private Bag 3, WITS 2050, South Africa • Telegrams 'Univwits' • Telex 4 271255A • Telephone (011) 716 1111

Dear Sir/ Madam

Thank you for your participation in the study. I know that filling out a questionnaire is tedious at the best of times, even more so the second time around. However, in order to make sense of any of the findings, I have to request that you assist me again in the completion of the attached questionnaire. Many of the questions asked, will sound familiar. But please answer all of the questions on all of the pages, reflecting honestly how you feel at present.

This questionnaire is slightly shorter than the first. Once again, in order to match your first and second set of responses, I must ask you to write your name in the space provided. The first set of questionnaires has been coded. This questionnaire will also be coded, after completion. There will be no way of tracing individual responses, but the information we receive from you will be valuable in helping us understand more about stress and coping.

I thank you for your support.

Yours sincerely

Karen Crous
Wits School of Psychology



UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Private Bag 3, Wits 2050, South Africa • Telegrams Unwers • Telex 4-271235A • Telephone (011) 7141111

Dear Sir/ Madam

This study forms part of a Thesis for a Masters Degree in Industrial Psychology at Wits University. The study is designed to investigate aspects of stress in your life, and the way you cope with stress. You will shortly be undergoing specialised training to learn more about stress and coping. As part of the study, we would like to explore how you view stress at present as well as the coping skills you utilise after the training you will receive in the forthcoming programme. Furthermore implications of the training on different aspects of working life will be investigated.

Please assist me by completing the attached questionnaire. As I will be requesting your participation once again after your stress management programme is concluded, I will have to request that you write your name on the covering page of the questionnaire. Once the questionnaires are completed, however, the questionnaires will be coded, and the information extracted will be completely anonymous and cannot be used by your employer to your disadvantage. There are no right (or wrong) answers, so please express your true feelings in your responses.

The questionnaire should take no more than about 30 minutes to complete. It is important that you answer all of the questions.

Thank you for participating in the study.

Yours sincerely

A handwritten signature in dark ink, appearing to read 'K. Crous', with a horizontal line underneath.

Karen Crous
Masters student
Wits School of Psychology

APPENDIX A

1. Covering Letter: Pretest
2. Covering Letter: Posttest
3. Questionnaire: Biographical Details
and Instruments used in the Study

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SECTION F

The next set of items deals with the overall satisfaction you feel regarding your job. Please place an X in the box you choose for each item.

	STRONGLY AGREE	AGREE	UNDECIDED	DISAGREE	STRONGLY DISAGREE
1. I find real enjoyment in my job	1	2	3	4	5
2. I like my job better than the average person	1	2	3	4	5
3. I am seldom bored with my job	1	2	3	4	5
4. I would not consider taking another job	1	2	3	4	5
5. Most days I am enthusiastic about my job	1	2	3	4	5
6. I am fairly well satisfied with my job	1	2	3	4	5

1. How long would you like to continue working in the present job? Mark the box of your choice with an X.

1	2	3	4	5	6
1 year	2 years	3 years	5 years	10 years	more than 10 years

Mark the box of your choice with an X.

	NO	NOT SURE	YES
2. If you were completely free to choose, would you prefer to continue working in your present job?	1	2	3
3. If you had to quit work for a while (for example, because of illness) would you like to return to your present job?	1	2	3

THANK-YOU FOR YOUR TIME

SECTION E

On a scale of 1 to 7, how would you rate the following questions?

1 = totally inaccurate

7 = totally accurate

	1	2	3	4	5	6	7
1. When I get what I want it's usually because I worked hard for it	1	2	3	4	5	6	7
2. When I make plans I am almost certain to make them work	1	2	3	4	5	6	7
3. I prefer games involving some luck over games requiring pure skill	1	2	3	4	5	6	7
4. I can learn almost anything if I set my mind to it	1	2	3	4	5	6	7
5. My major accomplishments are entirely due to my hard work and ability	1	2	3	4	5	6	7
6. I usually don't set goals because I have a hard time following through on them	1	2	3	4	5	6	7
7. Competition discourages excellence	1	2	3	4	5	6	7
8. Often people get ahead just by being lucky	1	2	3	4	5	6	7
9. On any sort of exam or competition I like to know how well I do relative to everyone else	1	2	3	4	5	6	7
10. It's pointless to keep working on something that's too difficult for me	1	2	3	4	5	6	7

Please mark the option you choose with an X.

	NOT USED	USED SOMEWHAT	USED QUITE A BIT	USED A GREAT DEAL
36. I talk to someone about how I am feeling	1	2	3	4
37. I stand my ground and fight for what I want	1	2	3	4
38. I take it out on other people	1	2	3	4
39. I draw out of my past experiences; I was in a similar situation before	1	2	3	4
40. I know what has to be done, so I double my efforts to make things work	1	2	3	4
41. I refuse to believe it has happened	1	2	3	4
42. I make a promise to myself that things will be different next time	1	2	3	4
43. I come up with a couple of different solutions to the problem	1	2	3	4
44. I try to keep my feelings from interfering with other things too much	1	2	3	4
45. I change something about myself	1	2	3	4
46. I wish that the situation would go away or somehow be over with	1	2	3	4
47. I have fantasies or wishes about how things may turn out	1	2	3	4
48. I play	1	2	3	4
49. I go over in my mind what I will say or do.	1	2	3	4
50. I think about how a person I admire would handle this situation and use that as a model	1	2	3	4

Please mark the option you choose with an X.

	NOT USED	USED SOMEWHAT	USED QUITE A BIT	USED A GREAT DEAL
16. I change or grow as a person in a good way	1	2	3	4
17. I apologise or do something to make up	1	2	3	4
20. I make a plan of action and follow it	1	2	3	4
21. I let my feelings out somehow	1	2	3	4
22. Realise I brought the problem on myself	1	2	3	4
23. I come out of the experience better than when I went in	1	2	3	4
24. I talk to someone who can do something concrete about the problem	1	2	3	4
25. I try to make myself feel better by eating, smoking, using drugs, or medication, etc.	1	2	3	4
26. I take a big chance or do something very risky	1	2	3	4
27. I try not to act hastily or follow my first hunch	1	2	3	4
28. Find new faith	1	2	3	4
29. I rediscover what is important in life	1	2	3	4
30. I change something so things will turn out all right	1	2	3	
31. I avoid being with people in general	1	2	3	4
32. I don't let it get to me; refuse to think too much about it	1	2	3	4
33. I ask a relative or friend I respect for advice	1	2	3	4
34. I keep others from knowing how bad things are	1	2	3	4
35. I make light of the situation; refuse to think too much about it	1	2	3	4

SECTION D

The following section gives an idea of how you cope with various stressful encounters. Each item represents a possible coping strategy. Please read each item carefully and mark the box of your choice with an X.

	NOT USED	USED SOMEWHAT	USED QUITE A BIT	USED A GREAT DEAL
1. I just concentrate on what I have to do next. - The next step	1	2	3	4
2. I do something which I don't think will work, but at least I am doing something	1	2	3	4
3. I try to get the person responsible to change his/her mind.	1	2	3	4
4. I talk to someone to find out more about the situation	1	2	3	4
5. I criticise or lecture myself	1	2	3	4
6. I try not to burn my bridges, but leave things open somewhat	1	2	3	4
7. I hope a miracle will happen	1	2	3	4
8. I go along with fate; sometimes I just have bad luck	1	2	3	4
9. I go on as if nothing has happened	1	2	3	4
10. I try to keep feelings to myself	1	2	3	4
11. I look for the silver lining, so to speak; try to look on the bright side of things	1	2	3	4
12. I stay more than usual	1	2	3	4
13. I express my anger to the person(s) who caused the problem	1	2	3	4
14. I accept sympathy and understanding from someone	1	2	3	4
15. I am inspired to do something creative	1	2	3	4
16. I try to forget the whole thing	1	2	3	4
17. I get professional help	1	2	3	4

Author: Crous Karen Deborah.

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