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**COPING WITH STRESS IN THE WORKPLACE
AN INVESTIGATION OF BLUE COLLAR
WORKERS**

A thesis presented in partial fulfilment of
the requirements for the degree of
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ABSTRACT

In recent years research on coping with job stress has begun to move away from investigation of the relationships between theoretical constructs and towards investigation of the constructs themselves. Such research includes the study by Dewe and Guest in which they presented an inductive approach to the development of a valid classification of the major methods of coping with work related stress built on a carefully articulated methodology. The present study replicated this methodology using a blue collar population. Comparisons were made between the present study and the results obtained by Dewe and Guest. Sex and ethnic differences were also investigated. Finally, the problem-focused, emotion-focused dichotomy was explored. Which was the most prevalent approach in the present population? One hundred and fifty three cleaners were given a self-report questionnaire consisting of both a coping measure and demographic information. Results indicated that five main coping strategies were used (Rational task oriented and preparation for dealing with the problem, Expression of emotion and avoidance, Attempts to tolerate or mitigate the effect, Distraction by pleasurable activities, and Emotional release). Despite the different work context, the present study showed consistencies with the previous studies. It appeared that four of the components were consistent across studies. These were direct action, emotional release, distraction, and passive rationalization. No sex differences in coping were found except in the use of prayer where it appeared that women used this strategy more frequently than males. No ethnic differences appeared to exist, that is, all ethnic groups used similar coping strategies. In contrast to previous findings, problem-focused coping was found to be the most prevalent form of coping among the present subjects. It is acknowledged that the cross sectional design, reliance on self report, and the characteristics of the questionnaire itself limit the conclusions to be drawn from the study. Future research should be undertaken on other populations, especially other blue collar workers with more restricted autonomy, thus counteracting some of the present study's limitations.

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CONTENTS

	Page
Abstract	ii
Acknowledgements	iii
Contents	iv
List of tables	vii
CHAPTER 1: INTRODUCTION	
Overview	1
Definitions of stress	2
Theories of stress	2
Blue collar stress	6
Definitions of coping	7
Theories of coping	8
Functions of coping	11
Coping strategies	12
Classification of coping strategies	13
Modes of coping	14
Coping styles versus coping behaviours	15
Appraisal	16
Coping resources	18
Coping responses	18
CHAPTER 2: LITERATURE REVIEW	
Coping with work stress	19
Group differences in coping behaviour	22
A: Sex differences and coping	23

2] Caffeine and coping	32
3] Smoking and coping	32
4] Religion and coping	34
Present study	36
Research aims and hypotheses	38

CHAPTER 3: METHOD

Subjects	40
Data collection: Choice of research strategy	41
Questionnaire	42
Coping measure	42
Demographic information	44
Ethical considerations	44
Pilot study	45
Procedure	45
Feedback	46

CHAPTER 4: RESULTS

Data analysis	47
Analysis 1	49
Analysis 2	52
Analysis 3	61
Analysis 4	62

CHAPTER 5: DISCUSSION

Internal structure of coping	65
Theoretical implications	67
Coping and sex differences	70
Emotion-focused versus problem-focused coping	75
Ethnic differences	76

Summary and conclusions	78
REFERENCES	81
APPENDICES	
Appendix 1	96
Appendix 2	97
Appendix 3	98
Appendix 4	105

LIST OF TABLES

		Page
TABLE 1	Sex differences in individual coping strategies	50
2	Male reported frequency usage of specific individual coping coping strategies	51
3	Female reported frequency usage of specific individual coping strategies	51
4	Details of Principal Components Analysis with varimax rotation for the five components	53
5	Items and loadings on each of the five principal components	53
6	Components of coping in five studies	59
7	Sex differences in ratings on items within each of the the five components on the coping scale	61
8	Ethnic differences between responses to items on the five components of coping scale	62
9	Male/female usage of emotion-focused and problem-focused coping	63
10	Emotion-focused versus problem-focused coping strategies	63
11	Ethnic usage of problem-focused and emotion-focused coping strategies	64

CHAPTER 1

INTRODUCTION

OVERVIEW

Coping is a commonly used word in our everyday language, but when we say that we are "coping" with the pressures at work, for example, what do we mean? According to some writers the term coping is a poorly defined construct with little or no consensus as to its meaning (Cohen, 1987; Stone & Neale, 1984). Most researchers agree, however, that in its simplest form coping is the organism's response to stressful events (Flemming, Baum, & Singer, 1984).

The present researcher was interested in how individuals coped with the pressures they encountered at work. An investigation into the relevant literature found that blue collar populations had not been investigated extensively. How did blue collar populations cope with stress in the workplace? Since blue collar workers may be subject to quite a different set of stressors to white collar workers, it was necessary to adopt a technique that was flexible enough to allow subjects to generate their own stimuli which could then be used to measure work stress. The study was then expanded to explore sex and ethnic differences in a specific population of blue collar workers.

Chapter 1 briefly reviews the literature on the theories of stress and coping while chapter 2 reviews previous studies in the area with particular emphasis on group differences in coping. The main focus of the present study is then discussed including the investigation of gender and ethnic differences in coping methods used by a group of service workers in the cleaning industry.

DEFINITIONS OF STRESS

In recent years, research in the area of occupational stress has reached a hiatus with increasing debate over both how we conceptualize stress and coping and how we investigate it (Newton, 1989). Many researchers have noted that stress is a vague and general concept that encompasses physiological, perceptual, and behavioural components (Bailey & Baghat, 1987; Newton, 1989).

Technically, stress can be defined as the psychological and physiological state of the individual which results as a response to one or more stressors. More simply it can be defined as the body's response to stressful stimuli (Dewe, 1985; Shouksmith, 1985). A stressful stimulus is whatever that individual finds stressful, whether it be working to a deadline or excessive noise and heat in the workplace.

It is now commonly accepted that stress is relational in nature involving some sort of transaction between the individual and the environment (Lazarus & Launier, 1978). In this regard, McGrath (1976) defines stress as the result of an interaction of person and environment which forces on the person, a demand, a constraint, or an opportunity for behaviour.

Psychological stress refers to demands (or the conflicts among them) that tax or exceed available resources (internal and external) as appraised by the person involved. The extent to which a demand on a person is stressful depends upon whether it is perceived as stressful by the individual. If an individual perceives a situation as stressful they will engage in certain behaviours in an attempt to cope with the situation. For example, an individual may find a looming deadline stressful, and as a coping strategy he/she may work later than normal in an attempt to meet this deadline.

THEORIES OF STRESS

Over the years there have been several theories that have attempted to explain stress. These theories can be seen to fall into three categories (Cox, 1978). The first approach

treats stress as a dependent variable, describing it in terms of the person's response to disturbing or noxious environments. Secondly, stress can be described in terms of the stimulus characteristics of those disturbing or noxious environments in which case it is viewed as an independent variable. Thirdly, and possibly the most adequate approach, is one in which stress is conceptualized as a reflection of a lack of fit between the person and his/her environment (Cox, 1978). Here stress is seen as an intervening variable between stimulus and response.

1] Response-based definitions and models

Hans Selye was one of the initial researchers in this area. In 1956 he wrote "stress is a non specific (physiological) response of the body to any demand made upon it" (cited in Cox, 1978). Selye saw stress as the person's response to the demands of the environment. His notion of stress consisted of three basic ideas, firstly that the physiological stress response did not depend on the nature of the stressor. He argued that the response syndrome represented a universal pattern of defence reactions serving to protect and preserve the system's integrity (Cox, 1978). Secondly, he believed that as this defence reaction progressed, with continual or repeated exposure to stressors, it proceeded through three identifiable stages which together represent his General Adaptation Syndrome. Thirdly, is his idea that these defence responses, if severe and prolonged, result in disease states, the so called diseases of adaptation.

This model, however, has several weaknesses. One is the fact that emotional release such as "anxiety" and "aggression" often associated with stress have not been taken into account. Another weakness is that in focussing on the body's physiological response to stressor agents, Selye has ignored the role of psychological process (Cox, 1978). It has now been suggested that much of the physiological response is not directly determined by actual presence of the stressor agent but by its psychological impact on the person.

2] Stimulus-based definitions and models

Stress can be described in terms of the stimulus characteristics of environments which

give rise to a stress reaction, or strain, within the individual. Symonds (1947; cited in Cox, 1978) wrote that "it should be understood once and for all that stress is that which happens to the man, not that which happens in him; it is a set of causes, not a set of symptoms".

This engineering analogy in stress research is appealing because of its simplicity, because of its closeness to the more formulated discipline of engineering and because it allows us to attempt to measure the stress to which a person is subjected by the same process as we measure that to which a machine is subjected (Cox, 1978). The major difficulty, however, is identifying what is stressful about a particular real life situation so that it can be measured. Another weakness in this approach is the fact that a stressful situation may evoke the appropriate response from most, but not all people. Hence, it seems that this approach fails to take into account individual differences.

3] Interactional definitions and models

The previous two models have failed to take explicit account of the person in relation to his/her environment. This third approach, however, is an interactional one, which expresses the view that stress arises through the existence of a particular relationship between the person and his/her environment (Cox, 1978). The only problem here is that of defining the relationship.

Cox and Mackay (1976; cited in Cox, 1978) posit a man-environment transaction. They suggest that "stress can be most adequately described as part of a complex and dynamic system of transaction between the person and his environment" (pp18). This model is strengthened by the fact that it emphasizes the effect of feedback, drawing attention to the notion that the model is cyclical rather than linear.

The model proposed by Cox and Mackay has five recognizable stages. These are; sources of the demand, perception of the demand, response to the stress, consequences of the coping responses, and feedback. Cox (1978) believes that this model adequately describes the operation of stress. It treats stress as an intervening variable, the reflection of a transaction between the person and his/her environment.

Another interactional model of stress is the one suggested by French (1974; cited in Landy, 1985). It is called the person-environment fit (P-E) model and emphasizes the match between the characteristics of the individual and the characteristics of the environment (Landy, 1985).

French's model suggests that environmental events are not universal stressors. Their stress value depends on the perceptions of the individual. These perceptions involve not only estimates of the demands being made by the environment but also estimates by the individual of his/her capability and motivation to meet these demands.

Secondly, the model suggests that individuals can be protected from stress by two mechanisms; social support and an ego defense network. These defences include classic mechanisms such as repression (ignoring the demands) and projection (seeing weaknesses in others rather than yourself). If neither of these mechanisms is operating, the person-environment fit model assumes that stresses will be converted into strains. These strains include poor performance, psychosomatic disorders, and dissatisfaction.

Mixed results for the P-E fit model have been obtained. Parkes (1982) found that social support decreased in student nurses exposed to work related stressors. On the other hand, LaRocco and Jones (1978) found that social support and stress were independent of one another. Social support did not seem to moderate the experience of stress. In a study of bus operators Blau (1981) came to a similar conclusion.

Both Lazarus (1975) and McGrath (1976) have presented definitions of stress that are essentially interactional in nature. They both acknowledge that stress not only depends on external conditions but also on the constitutional vulnerability of the person and the adequacy of his or her cognitive defence mechanisms.

It may be argued that the interactional approach does not offer much more in the way of definition than the other approaches (Cox, 1978). However, the interactional model is a psychologically based approach and explicitly deals with individual perceptual factors. Moreover, because it is eclectic in nature, it accounts for more available data

on stress than the other approaches. As Cox (1978) notes, it does provide clear guidelines for the study and alleviation of stress and for this reason the present study will adopt the transactional approach.

BLUE COLLAR STRESS

"Blue collar" is a term used to denote a section of the working population (Wallace, Levins, & Singer, 1988). In its narrowest usage it implies unskilled, manual work but it may be broadened to cover "service workers" including janitors and cleaners. Hence blue collar workers are those whose jobs involve rote manual labour (Shostak, 1980).

Blue collar workers have many sources of stress due to the type of work they carry out. Some of these stressors are:-

- * heavy work or physical conditions such as heat, noise, dust, or the presence of toxic substances
- * paced and/or repetitive work where there is a demand for speed
- * work which is monotonous, requires no skill and where there is little control
- * tasks characterized primarily by various types of information processing activities and decisional complexity or performed under time constraints

In the present study with a sample of service workers in the cleaning industry an attempt was made to identify all the stressors present in the workplace. Through informal discussions with managers and observation of workers in their work environment, several of the blue collar stressors listed above were observed. These included physical conditions such as noise and toxic substances, performance of tasks under time constraints and monotonous work over which there is little control.

Due to complaints from blue collar workers over the years it has been noted that blue collar workers feel they have too little autonomy, challenge, compensation, control over the task, health protection, promotion opportunity, safety protection, security in job retention, and status at and from the job (Pfeffer, 1979). They also feel constrained by

too much arbitrary supervision, insistence on petty rules and regulation, repetitive or rigid work duties, and shortages of indispensable tools and supplies (Berg, Freedman, & Freeman, 1978). Worker input is also often excluded from the workplace decision making process (Shostak, 1985).

Blue collar workers traditionally have had low levels of control over how time is spent at work (Fisher, 1985). They have less chance to influence the conditions of the task itself as specified operations must be carried out, usually in an organized way (Fisher, 1985). Workers must contribute to their part of the production line in a specified way or follow set routines that leave little room for change.

Blue collar work also provides little opportunity of attenuating, terminating, or avoiding, unpleasant conditions. The only options in most cases is for the individual to put up with the conditions or leave the job. However, since most blue collar positions tend to be in the lower wage levels, there may be less total jurisdiction over whether to leave the job or not and less control over daily existence because many of the material advantages cannot be obtained (Fisher, 1985).

In its broadest sense, coping refers to the things that people do to avoid being harmed by stress (Pearlin & Schooler, 1978). By and large, blue collar work groups are confronted with a higher proportion of potential harms than other work groups and yet they have been underrepresented in coping research (Murphy, 1985).

DEFINITIONS OF COPING

It is argued that coping is a poorly defined construct with little or no consensus between researchers (Cohen, 1987; Stone & Neale, 1984). Most researchers agree that coping can be described generally as a response to stress (Fleming, Baum, & Singer, 1984). However, the concept of coping is much more complex than this and it is this complexity that makes defining coping so difficult and varied.

Coping, according to Fleishman (1984), refers to both overt and covert behaviours that are taken to reduce or eliminate psychological distress or stressful conditions. Coping has also been defined as "efforts, both action-oriented and intra-psyche, to manage (that is, master, tolerate, reduce, minimize) environmental and internal demands, and conflicts among them, which tax or exceed a person's resources" (Cohen & Lazarus, 1979, p219). This definition acknowledges that coping can occur in anticipation of a stressful confrontation or in reaction to a present or past situation (Cohen, 1987; Cohen & Lazarus, 1979).

In defining coping there has been a tendency to see coping as something that comes into play when someone is having difficulty. Lazarus and Launier (1978) have argued that this is not necessarily the case. They suggest that coping is often successful and/or routine in nature with the individual not experiencing any strain (Newton, 1989). The problem with definitions that focus on difficulty in coping is that they ignore situations where the same coping behaviour may be successful.

Lazarus and Folkman (1984) define coping conceptually as "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (P.141). This refers to the individual's efforts to master, reduce, and tolerate the internal and/or external demands that are created by the stressful transaction (Folkman, 1984). The important feature of this definition is that coping is defined independently of its outcome. Hence, the focus is on efforts to manage stressful encounters (what the person does or does not do) and not the outcome. This is the definition that will be adopted in the present study.

THEORIES OF COPING

There are several approaches to coping identified in the literature. These include the psychoanalytic approach, the personal trait or style approach, and the process theory approach (Edwards, 1988).

The psychoanalytic approach to coping is typically described in terms of realistic thoughts and actions which solve problems confronting the individual (Edwards, 1988). Freud, Adler, and Jung all use classifications of adjustment and defense mechanisms by which individuals deal with intrapsychic conflict (Rychlak, 1981).

The psychoanalytic approach typically defines coping in terms of successfully meeting the demands of a stressful situation, while failure to meet these demands indicates a lack of coping (Edwards, 1988). It is important, however, not to overlook cases where individual and situational variables cause similar coping strategies to yield different effects on well-being (Edwards, 1988). For example, one individual may engage in exactly the same coping behaviour as another, yet the overall outcome, or success of the coping may be completely different.

More recently hierarchical descriptions of adjustment processes have been developed where coping represents the highest level of adjustment with processes further down the hierarchy representing less reality-oriented (and thus inherently inferior) methods of adjustment (Hann, 1969, 1977; Menniger, 1963; Valliant, 1977). It has been suggested, however, that coping may operate at more than one level at once. That is, an individual may exhibit well developed coping techniques and reality distorting techniques at the same time. It may be that they just relate to different aspects of the individual's life. The hierarchical approach fails to account for this.

Coping can also be described in terms of a personality trait or style. A considerable amount of research has characterized coping in terms of a relatively stable personality trait or style (Edwards, 1988). These studies investigate particular personality traits or coping styles such as type A behaviour pattern, and hardiness, under the assumption that individuals with certain predispositions, for example, high hardiness and internal locus of control are better able to cope with stress and, therefore, suffer fewer of its negative consequences (Edwards, 1988). Little evidence has been found to support this view (Cohen & Edwards, 1988).

There have been other serious criticisms made of the personality trait or style approach. One such criticism is that personal traits and styles are often poor predictors of actual situational appraisals and coping behaviours (Lazarus & Folkman, 1984). Another criticism is that the actual coping processes are rarely measured in the literature. They are usually inferred from the personality measure in question (Edwards, 1988). A final criticism of this approach is that this description of coping assumes that coping is, for the most part, unidimensional and stable across time and situations (Lazarus & Folkman, 1984). Empirical evidence indicates, however, that coping processes are multi-dimensional and vary over time and across situations, suggesting that characterising coping as a single stable dimension is overly simplistic (Folkman & Lazarus, 1985; McCrae, 1984).

All in all, studies have found little evidence to suggest that coping processes are influenced by personality traits (Folkman, Lazarus, Gruen & DeLongis, 1986). Traits do not describe the coping processes adequately even if they are related to coping (Stone & Neale, 1984).

As methodological developments have been introduced in recent years, the perspective on coping research has altered. Coping as a process-oriented approach is now the major emphasis. In the trait-oriented approach the situation is of little importance. However, in the process-oriented approach the context is crucial because coping is assessed as a response to both the physiological and environmental demands of specific stressful encounters (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). Coping behaviour need not occur if there is no stressful encounter.

Lazarus and colleagues have been responsible for the development of the process-oriented approach (eg. Lazarus, 1966; Lazarus & Launier, 1978; Lazarus & Folkman, 1984). Coping is seen as transactional and is determined by the ongoing reciprocal relationship between the person and the environment (Folkman & Lazarus, 1980). Emphasis is on the cognitive appraisal that the individual makes of the situation and coping as a process. Appraisal is essentially how an individual perceives and evaluates

an encounter. The type of coping response used is based on an appraisal of the best method to achieve the outcome that is desired (Roskies & Lazarus, 1980).

Lazarus' (1966) theory and the reformulation of this (Lazarus & Folkman, 1984) has become the most pervasive in coping research. Parkes (1986), however, suggests that current research methods are not yet adequate to deal with the theoretical and empirical complexity of transactional process models.

The theory suggests that when an individual is faced with a possible stressful event, appraisal occurs. Initially this involves the individual evaluating whether or not the encounter is relevant to his/her well-being. If the event is appraised as stressful, emotional and physiological changes may occur, and coping becomes necessary. The individual then evaluates the various coping options through secondary appraisal. The theory also allows for the possibility of feedback. Feedback occurs from changes in the person-environment relationship and from reflection of what has gone before, as the transaction proceeds (Lazarus, 1981). Feedback also allows for the process of reappraisal to occur if necessary (Lazarus, Averill, & Opton, 1974). That is the secondary appraisal process may occur again after the individual has assimilated the additional information that he/she has gained from the transaction. It also provides the individual with information on emotional, physiological, and environmental responses to the coping strategies in use. The present study will use this theoretical framework.

FUNCTIONS OF COPING

Coping may serve one of two functions: problem solving or emotion regulation (Folkman & Lazarus, 1980; Lazarus, 1975). Problem-focused coping tackles the source of the stress (Cohen, 1987; Dewe & Guest, 1990; Folkman, 1982; Folkman & Lazarus, 1980). The objective here is to change the situation for the better if we can. This is done by either changing one's own offending action (focus on self) or by changing the damaging or threatening environment (Lazarus, 1981).

Emotion-focused coping tries to deal with the emotional discomfort caused by the stress (Dewe & Guest, 1990; Folkman & Lazarus, 1980; Folkman, 1982; Cohen, 1987). The objective here is to manage the somatic and subjective components of stress-related emotions themselves, so that they do not get out of hand and do not damage or destroy morale and social functioning (Lazarus, 1981).

Problem-focused and emotion-focused coping can facilitate each other (Folkman, 1982). For example, an emotional response may be reduced by the use of problem-focused coping. However, problem-focused and emotion-focused coping may hinder each other. Emotion-focused coping may, in some cases, delay or obstruct problem-focused coping.

The functions of coping are linked with the specific strategies used. A coping function refers to the purpose a strategy serves (Lazarus & Folkman, 1984). Different coping strategies can serve different functions for different people (Stone & Neale, 1984). For example, a strategy such as "taking some immediate action" may involve steps toward solving the problem (problem-focused coping) or steps towards ignoring or avoiding the problem (emotion-focused coping).

COPING STRATEGIES

"Strategy" is the most prevalent term for attempts to manage stressful situations. The term **strategy** is used according to Ray, Lindop, and Gibson (1982), rather than **response** coping because coping behaviour has a purpose. Many other terms are also used and appear to be used interchangeably. McCrae and Costa (1986) refer to coping **mechanisms**; **behaviours** in response to certain situations is used by Menaghan (1982); and Lazarus (1982) names **activities** as the crucial mediating process. It is essential to clarify which term is used in a given stressful situation and what is meant by it (Folkman, Schaefer, & Lazarus, 1979). In the present study the term **strategy** will be used since coping in the work environment is seen to have a purpose.

When coping is viewed from the process-oriented perspective, coping strategies are considered conscious responses to external influences which can be identified objectively

as opposed to the old view of them being seen only as unconscious defense mechanisms (McCrae, 1984).

CLASSIFICATION OF COPING STRATEGIES

Since many coping strategies are available, Roskies and Lazarus (1980) consider that a method of classification is essential for the systematic study of coping. At present no agreed upon typology of coping nor an adequate method of assessing coping exists (Moos & Billings, 1982; Stone & Neale, 1984). According to Lazarus and Launier (1978) this has impeded the study of coping processes.

Nevertheless, attempts have been made to develop taxonomies. The number of coping strategies proposed by theorists differs considerably ranging from global dichotomies to attempts at finer distinctions (McCrae & Costa, 1986).

Most approaches distinguish between active strategies which are directed toward confronting the problem and strategies which endeavour to reduce tension by attempting to avoid the problem (Holahan & Moos, 1987). They propose a classification of two categories: approach and avoidance. Approach strategies are active cognitive and behavioural attempts to manage the stressful situation such as seek additional information and take immediate action. Avoidance strategies are cognitive and behavioural attempts to avoid the stressful event such as take the day off or avoid the problem.

Folkman and Lazarus (1980) propose a typology of strategies which corresponds to their conceptualization of coping functions: problem-focused and emotion-focused. Problem-focused coping strategies are attempts to manage or alter the situation such as get advice or suggestions from someone at work and try to find out more about the situation by seeking additional information. Emotion-focused strategies are attempts to manage or reduce emotional distress such as losing one's temper for a moment or distracting yourself with some fun or pleasurable activity.

Fleishman (1984) argues against the notion that people can be classified as either problem-focused or emotion-focused copers. He believes that people do not use some types of coping to the exclusion of others.

In the present study the internal structure of coping will be identified by allowing the dimensions of coping to emerge from statistical analysis. A combination of emotion-focused, problem-focused, avoidance, and direct action strategies will be included. For the purpose of one analysis, the levels of problem-focused and emotion-focused coping individuals engage in will be investigated.

MODES OF COPING

Lazarus and Launier (1978) identified four main coping modes. Each of these serve both problem-solving and emotion-regulatory functions and are capable of being directed at either the self or the environment. Each is also concerned with either past or present (harm/loss) or future (threat or challenge). These modes are: information-seeking, direct action, inhibition of action, and intra-psychic processes.

Information seeking involves scanning the characteristics of a stressful encounter for the knowledge needed to make a sound coping decision or to reappraise the damage or threat (Lazarus, 1981). Information may also perform the function of making the person feel better by rationalizing or bolstering a past decision (Janis, 1968; Janis & Mann, 1977), or by making the transaction seem more under control (Lazarus & Launier, 1978)

Direct action involves any action taken to change the environment or oneself in some way in order to undo the injury, prevent harm, or to meet the challenge (Wrubel, Benner, & Lazarus, 1981). Such actions are as diverse as the the environmental demands and personal goals people have to manage including expressing anger, seeking revenge, fleeing, suicide, and so on. (Lazarus, 1981).

Inhibition of action is also dependant upon the situation. In some situations it is appropriate not to act while in others inhibition of action is inappropriate (Lazarus &

Launier, 1978). Effective coping may often call for holding back of action impulses which will do harm (Lazarus, 1981). Taking action may not fit the demands of the transaction. A person may resist taking action because action may be poorly grounded, dangerous, embarrassing, or morally reprehensible (Wrubel, Benner, & Lazarus, 1981).

Intrapsychic processes include all cognitive processes designed to regulate emotion by making the person feel better (Lazarus, 1981; Lazarus & Launier, 1978), in short, things a person says to him/herself. These include self deception mechanisms or defences such as denial, reaction formation and projection (Lazarus, 1981). Avoidance efforts to obtain detachment or insulation (as in isolation, undoing, and intellectualization) from a threat to achieve a feeling of control over it are also included (Lazarus, 1981).

COPING STYLES VERSUS COPING BEHAVIOURS

Distinction needs to be made between "coping behaviour" and "coping style" in the definition and measurement of coping (Newton, 1989).

Coping behaviour is the behaviour exhibited in dealing with a specific event. It consists of any behaviour that the individual engages in to deal with a situation that has been appraised as stressful. For example, an individual on appraising an event as stressful may take immediate action in the form of setting priorities and seeking additional information or may avoid or ignore the problem.

Coping style refers to any pattern of coping which an individual exhibits over the longer-term, resulting either from the way he or she tends to appraise events or from semi-habitual behaviour which s/he employs (Newton, 1989). Long-term coping patterns might exist relatively independently of the environment, that is, as personality/behavioural traits, they might be conditioned, or they may be products of particular environmental contexts.

Individuals tend to perceive their coping behaviour in the short-term to be more problem-focused than their general style of coping over time (Dewe, Guest, & Williams,

1979). These results underline the need to distinguish between coping behaviour and coping style, since the form of coping reported appears likely to be quite different in the short and long-term.

Assessing short-term coping behaviour implies investigating specific stressful episodes with limits on time recall (Newton & Keenan, 1985; Parkes, 1985). Tulving (1983) has argued that episodic and semantic memory are functionally different, with no clearly established association between the two memory systems. The implications, therefore, for coping research are that it may be unwise to attempt to generalize from respondents' episodic memory of coping with incidents to their semantic memory of how they generally cope, since one may be tapping two functionally different forms of memory system. According to Newton (1989), the problem with much current coping research is that it aims to access episodic memory of coping, but in reality may access semantic memory.

The present study aims to investigate individuals' coping styles. In other words, what pattern of coping do individuals exhibit over the long-term?

APPRAISAL

The process of evaluating the significance of a transaction for one's wellbeing is referred to as primary appraisal (Lazarus, 1981). There are three forms of primary appraisals. These are judgements that the transaction is either:

- 1.) Irrelevant: meaning there is no current implication at all for the individual's wellbeing.
- 2.) Benign-positive: meaning that the individual perceives the event as a positive state.

- 3.) Stressful: meaning that the individual judges something to be at stake (Folkman & Lazarus, 1985). Stress appraisals can be of three kinds: harm/loss, threat, or challenge.

Coping is not required in benign-positive or irrelevant appraisals. However, coping is necessary in stress appraisals. In harm/loss some damage has already occurred as in, for example, the loss of a job. Threat involves losses or harms that have not yet occurred but are anticipated such as problems of finding a job or the threat of redundancy. Challenge has a more positive tone and generally requires exceptional efforts from the individuals, as in the case of job promotion or a new career.

Primary appraisal also involves the possibility of feedback from changes in the person-environment relationship and from reflection, as the transaction proceeds, potentially allowing for changes in the quality and intensity of the emotion (Lazarus, 1981). This change in the original perception of the transaction is referred to as reappraisal (Lazarus, Averill, & Opton, 1974). Reappraisal may involve changing an original perception from benign to threatening or vice versa. Reappraisals occur in response to changing external or internal conditions. They arise from new cues, reflection about the original evidence, or feedback from the effect of the individuals' own reactions.

Primary appraisal concerns the significance of a transaction for wellbeing, a question of "is there anything at stake here?". If the answer is that "I am in jeopardy", that is, facing harm/loss, threat or challenge, a key adaptational process is called into being, namely "coping" (Lazarus, 1981). This is the secondary appraisal process where there is a perception of the range of coping alternatives through which harm can be mastered or beneficial results achieved (Lazarus, Averill, & Opton, 1974). Whether consciously and deliberately, or unconsciously and automatically a decision is made about what to do (Lazarus, 1981).

Primary and secondary appraisal interpenetrate each other and the distinction is mainly designed to point to the sorts of cues or information on which the subsequent coping activity and the type of emotion depend (Lazarus, Averill, & Opton, 1974).

COPING RESOURCES

Coping resources refer not to what people do, but to what is available to them in developing their coping repertoire (Pearlin & Schooler, 1978). Social resources are represented in the interpersonal networks of which people are a part and which are a potential source of crucial supports. These include family, friends, co-workers, and neighbours.

Psychological resources are the personality characteristics that people draw upon to help them withstand threats posed by events and objects in the environment (Pearlin & Schooler, 1978). Coping resources also consist of the skills people draw upon and are considered to be advantageous across problem situations such as positive attitude towards self (Menaghan, 1982). Hence, psychological resources are usually considered to be fairly stable personality factors (Israel, House, Schurman, Heaney, & Mero, 1989).

COPING RESPONSES

Coping responses represent the things that people do, their concrete efforts to deal with the life strains they encounter in their different roles (Pearlin & Schooler, 1978). These are the specific strategies or actions taken by individuals to deal with a given problem or stress and include actions such as ignoring it, talking it over, and so on. (Menaghan, 1982; Pearlin & Schooler, 1978). Coping strategies, on the other hand, are responses to a specific stressful situation (Israel, House, Schurman, Heaney, & Mero, 1989; Menaghan, 1982).

CHAPTER 2

LITERATURE REVIEW

COPING WITH WORK STRESS

Studies of work-related stress have for some considerable time included questions about coping. The methodology of most of these studies has been to ask open-ended questions which are then content-analysed (Dewe & Guest, 1990). It is recognised that the type of questions asked can influence the responses, hence limiting the scope for comparisons across studies.

Many studies have attempted to empirically derive descriptive classifications of coping. Such studies include those of Kahn et al (1964), Hall (1972), Shinn et al (1984), Burke (1971), Burke and Belcourt (1974), and Parasuraman and Cleek (1984). A major shortfall of these studies, however, is that they used existing frameworks to determine coping. Existing frameworks include the problem-focused, emotion-focused distinction proposed by Folkman and Lazarus (1980); the three stages proposed by Pearlin and Schooler (1978) of change the situation, alter the meaning/appraisal, and control feelings of discomfort, or the three stages proposed by Latack (1986) of control, escape, and symptom management.

Newton and Keenan (1985) avoided using existing frameworks to determine coping. In their study four hundred and seventy four recently employed engineering graduates were asked to describe a stressful incident that had occurred in the previous 14 days. Of those, 162 reported a work related incident. These individuals were also asked "how did you handle the incident you described above?". Analysis was then conducted in two stages. An initial content analysis produced 29 categories which were then reduced to 15 on the basis that certain categories covered closely-related areas. Finally, six classes of coping behaviour were identified. These were: talk to others, direct action, preparatory action, withdrawal behaviour, helplessness/resentment and other.

A study by Latack (1986) is one of the few to focus specifically on the assessment or evaluation of methods of coping with stress at work. In this study she developed and validated measures of the three coping dimensions of control, escape, and symptom management. Items were written to tap each of these dimensions. The initial pool of items was based on empirical studies of coping done by Anderson (1977), Burke and Belcourt (1974), Hall (1972), and Pearlin and Schooler (1978). In addition, interviews with managerial and professional employees, and discussions with colleagues interested in this area were used. Data was collected from a sample of 109 professionals and managers. These data were then cluster analysed. From this, Latack was able to obtain the three dimensions of control, escape, and symptom management.

Latack's study is important because it challenges the validity of the more conventional distinctions between action and cognitive re-appraisal. It also challenges the distinction between problem-focused and emotion-focused dimensions of coping. These challenges were made using a rigorous methodology. However, this study is limited in that it attempts to validate an already preconceived conceptual framework.

No consistent pattern emerges from the above studies which might lead to an empirically based classification. However, what does emerge is an indication that the range and complexity of coping behaviours is not captured by the dominant distinction between problem-focused and emotion-focused approaches (Dewe & Guest, 1990). Since the transactional model emphasizes variations both between individuals and between environments, this variability of results should not be seen as surprising.

In many studies, however, the measurement of coping has been overshadowed by interest in the influence of situational and individual differences on coping behaviours or the effectiveness of different methods of coping. According to Dewe and Guest (1990), "the research priority should be to investigate the coping construct itself thereby avoiding what appears to be a trend in occupational stress research to study relationships between the constructs before the nature of the constructs themselves have been thoroughly examined" (pp.138).

A study by Folkman and Lazarus (1980) has moved research in this direction. They have used a combination of open-ended critical-incident questions alongside a 68-item Ways of Coping measure. The "Ways of coping" checklist was developed from previous frameworks and suggestions from the literature. This Checklist required binary, yes or no responses, and was always answered with a specific stressful event in mind. The general conceptual framework of problem-focused and emotion-focused techniques was imposed in the study. However, the measure was developed and validated statistically, using factor analysis.

In another major study of stress and coping, Pearlin and Schooler (1978) interviewed a sample of 2300 adults representative of the urbanized area of Chicago. Interviews included a number of questions about the coping repertoires people employ in dealing with the strains they experience in different roles. Individuals were asked not only to identify the problems that they face, but also to describe how they attempt to deal with them. Responses were then factor analysed and scored to provide a measure of coping. This factor analysis produced 17 factors. Four factors were found in the occupational domain. These were: substitution of rewards, positive comparisons, optimistic action and selective ignoring.

Pearlin and Schooler argue, however, that across the various domains of life, the threefold distinction between responses that (1) modify the situation, (2) control the meaning of the problem and (3) control the feelings of discomfort, is conceptually the most useful. It can be argued that although the 17 factors, found by Pearlin and Schooler, can be fitted into the three major categories, what appears to be a promising statistical analysis is subordinated to an imposed conceptual scheme. Therefore, although these studies, together with Latack's research in a work setting, point towards elements of a methodology, they are all limited by the imposition of pre-determined conceptual frameworks (Dewe & Guest, 1990). Hence, the need remained for a sound, empirically based classification of methods of coping with work-related stress.

This led to a growing recognition that measuring coping strategies required the development of sound techniques and methodologies (Dewe, 1991). Several researchers

have attempted to develop taxonomies of methods of coping with stress at work (Dewe, 1989; Dewe, 1991; Dewe & Guest, 1990).

Dewe and Guest (1990) set out to evaluate an approach to measuring coping with stress in work settings and, using this approach, to present a taxonomy of methods of coping. This resulted in the development of a 63-item checklist of coping techniques. This was generated by following the dominant research methodology of asking open-ended questions which are then content analyzed.

Dewe and Guest (1990) conducted studies on four populations: supervisors and administrators, nurses, teachers, and church ministers. The coping strategies of each of these populations were then compared. Principal components analysis of checklists developed for each population revealed five forms of coping which emerged consistently across the studies. These components were relational task-oriented behaviour, emotional release, distraction, passive rationalization, and social support. Each population also produced at least one unique category. This study, however, and subsequent studies, using this checklist have limited their subject pool to white collar workers. At the present time there is a need to test this checklist on blue collar workers. This may help us to find out whether the five forms of coping which emerged consistently in the white collar populations will emerge in a blue collar population, especially since the latter are expected to have limited autonomy at work.

GROUP DIFFERENCES IN COPING BEHAVIOUR

In a review of the literature it became apparent that several areas required further research. One of these was the different factors that differentiate between groups. Below is a review of the factors that have been shown to differentiate between different subgroups in the population. The differences considered here concentrate on sex and ethnic subgroups.

A: SEX DIFFERENCES AND COPING

The number of employed women has increased dramatically in the past decade (Powell, 1988), yet, the vast majority of studies of stress and coping have either failed to include female subjects or have not examined sex differences (Jick & Mitz, 1985). In our society differences are likely to exist because resources, rewards, and evaluations are often sex-linked (McDonald & Korabik, 1991). Jick and Mitz (1985) contend that differences might exist not only in the work stressors experienced by men and women, but also in their coping behaviour.

Gender has often been cited as playing an important role in both individuals' choice of coping strategies, that is, their response to stress in a particular situation and coping styles, that is, their characteristic modes of dealing with stress (Miller & Kirsch, 1987). Conventional wisdom has it that men are taught to emphasize instrumental, analytical, problem solving skills and that women are socialized to be more emotionally sensitive, expressive and dependent than men (Folkman & Lazarus, 1980). This suggests that men would tend to be more problem-focused in their coping and that women would tend to be more emotion-focused in their coping. Miller and Kirsch (1987) found that six out of seven studies investigating sex differences did indeed find significant sex differences. However, the nature and direction of these effects is somewhat controversial (Miller & Kirsch, 1987). Folkman and Lazarus (1980) found men relied more on problem-focused coping in work situations than women. No sex differences emerged in the use of emotion-focused coping strategies. Stone and Neale (1984) corroborated this small effect. Small gender effects have also been found by Pearlin and Schooler (1978) and Billings and Moos (1981).

Billings and Moos (1981) studied a community sample of adults and found that women scored higher than men on emotion focused coping. No difference was found in problem-focused coping. Consideration of the measures used to assess coping may partially resolve these discrepancies. In the studies mentioned previously subjects were asked to choose a recent stressful event and to indicate and describe the strategies they actually employed while coping with it (Miller & Kirsch, 1987). However, the

assessment in the Billings and Moos (1981) study involved only the type and frequency of responses used and the perceived stressfulness of the sampled event. In contrast, Folkman and Lazarus (1980) used the Ways of Coping Questionnaire (WCQ) (Miller & Kirsch, 1987). The WCQ collects information on the type and frequency of responses used and the perceived stressfulness of the sampled event and also information which assesses whether the event in question is perceived to be controllable, uncontrollable or requiring more information. Because the subjects in the Billings and Moos study could recall any situation at all, they tended to recall controllable situations, and this may explain why these authors failed to find sex differences (Miller & Kirsch, 1987). This does not explain, however, the inconsistencies in emotion-focused coping.

Viney and Westbrook (1982) asked chronically ill medical patients to indicate how they coped with their illness by rank ordering six different coping strategies. These strategies were supplied on cards by the experimenter. It was found that men more often than women use "action-strategies". Action strategies seem conceptually similar to the definition of problem-focused coping proposed by other investigators (Miller & Kirsch, 1987). Thus, the study supports the findings of Folkman and Lazarus (1980). However, all of the above studies failed to take into account that men and women occupy different types of jobs.

Women are more likely to hold lower level jobs that restrict the use of problem solving strategies (Folkman & Lazarus, 1980). Thus, the sex differences in these studies might be attributable to differences in the kinds of jobs held by men and women (McDonald & Korabik, 1991). Many of the studies that have been done have compared males' and females' coping strategies where males are in managerial positions and women are in lower level positions. In the lower level occupations there is often little opportunity to use problem-solving strategies.

In a study by McDonald and Korabik (1991) sex differences in managers were examined in an attempt to see if differences in coping strategies existed. Initially Vitaliano, Russo, Carr, Maruro, and Becker's (1985) modified version of Folkman and Lazarus' (1980) Ways of Coping Checklist (WCC) was given to 222 male and 222 female managers who

were matched for job position and tenure. Of the 247 who returned the questionnaire, 39 (19 male and 20 female) were then interviewed using a critical incidents technique. Along with this the Work Stressors Questionnaire constructed by Davidson and Cooper (1983) was administered. This was done to supplement the more qualitative data obtained via the critical incidents procedure. This methodological procedure was felt to provide in-depth information on specific real life stressful situations from the phenomenological perspective of the subjects. No sex differences were found in the strategies that male and female managers adopted to deal with work related stressors. This finding supports the idea put forward by Folkman and Lazarus (1980) that sex differences in coping may be attributable to women being in lower level jobs that allow less opportunity to use problem-focused strategies. This study was, however, only a preliminary step in understanding some of the issues involved in coping with stress and findings suggest that further investigation of sex differences is warranted, especially where men and women occupy similar level jobs.

It is also thought that women are disadvantaged by the lower social status they often experience and by role overload or the multiple role demands made of them, such as worker and homemaker (Conger, Lorenz, Elder, Simons, & Ge, 1993). Women's greater psychological distress may also be due to lack of adequate personal or social resources for coping with the stresses and strains of life (Kessler & McLeod, 1984). Some investigators have suggested that lower status groups (including women) generally suffer greater emotional problems because they are exposed to a larger number of undesirable life events (Dohrenwend, 1970; Thoits, 1987).

Exposure to these undesirable life events often effect women's eating patterns. Some women eat more when stressed, others eat less. For some people, especially women, losing or putting on weight can be a barometer of the level of long-term stress (Rudinger, 1988).

In Great Britain, the National Council Of Women has recently issued a Charter for Women's Health based on a national survey of 10,000 women (Wheatley, 1991). In an analysis of 1,000 replies, exercise, relaxation techniques and overeating or undereating

were the main ways that the respondents had used, or considered using, to deal with stress (Wheatley, 1991). However, without a comparable survey of men, it is difficult to determine to what extent women may feel more stress than their male counterparts and to what extent over or under eating is attributable to their stress levels. Investigation, therefore, should be taken to examine whether women more than men do indeed "eat more" in response to stress.

B: COPING AND ETHNIC DIFFERENCES

In the literature, differences between people have been grouped into three categories based on an individual's skin colour, his/her thoughts, beliefs and practices, and his/her social and cultural heritage.

When we refer to social groupings based on visible physical characteristics (primarily skin color) and on assumedly common ancestral origins, we refer to an individual's race. Race, however, is not meant to denote biographically distinct groups (Johnson, 1990; Mack, 1968).

The thoughts, beliefs, practices and behaviours of a group of people in the areas of history, religion, social organization, economic organization, political organization, and collective production refer to an individual's culture (Karenga, 1988; Sundberg, 1981; White, 1984). A culture according to White (1984) is a distinctive, coherent, persistent, psychological perspective or frame of reference that is evident in behaviour, attitudes, feelings, life styles, and expressive patterns. Culture can also be understood as having profound effects on how an individual experiences his/her world (Slavin, Rainer, McCreary, & Gowda, 1991).

An individual's social and cultural heritage, passed on to group members from one generation to the next is referred to as ethnicity (Rose, 1964). Socially defined racial groups have different cultures and ethnic groups within them (Slavin, et al, 1991).

We often take the position that all human beings share certain formal characteristics and behave according to common principles regardless of cultural variation and its effect on psychological make-up. However, these common principles may be expressed in different ways, ways that reflect the specific contents of a culture (Lazarus, 1966, 1991).

General concepts of psychological stress production and reduction, therefore, must provide for variation in the psychological characteristics of different peoples. If motivational patterns and belief systems based on cultural values and social experience differ, the precise conditions that produce psychological stress in one culture may be different from those that produce it in another (Lazarus, 1966). For example, looking across cultures, what is stressful in Japan, for instance, might not be stressful in Europe or the United States, and vice versa (Lazarus, 1991). A Japanese person may cope in a different way to a westerner because of different social values (Lazarus, 1991). It has been suggested in analyses conducted by Doi (1963, 1986) that these similarities and differences might hinge on quite subtle meanings which could be missed in superficial comparisons.

Culture can be said to affect the individual's appraisal of the event, the coping efforts that are put forward, and the adaptational outcomes of the event. At the primary appraisal level there is an effect of cultural/family definition of the event. There is a degree of fit between the event and the cultural understanding of it (Slavin, et al, 1991).

Cultural definitions of behavioural options, role definitions, beliefs about fate, and beliefs about how the system works all affect an individual's secondary appraisal. Ethnic identity, beliefs about group efficacy, definition of family, community and social network also affect secondary appraisal (Slavin, et al, 1991). They affect individuals in that they influence the coping choices available to them.

Coping efforts, problem-focused or emotion-focused, are also affected by culture. The type of coping employed can be affected by culture specific coping behaviours (such as rituals), cultural and mainstream sanctions against some coping strategies, or biculturation, and acquisition of skills to negotiate both minority and majority cultural

settings (Slavin, et al, 1991). Adaptational outcomes are also affected by culture. There are cultural influences on symptom presentation and there are cultural norms for behaviour (Slavin, et al, 1991).

Cultural groups vary greatly in their definitions of the social resources available to an individual. For example, there is extensive empirical evidence to suggest that African American culture defines family more broadly than does European American culture and that the former look to extended family relationships for support more extensively than do the latter (Dressler, 1985; Stack, 1974; Wilson, 1989).

Some coping behaviours are prescribed and others are proscribed within different cultures (Slavin, et al, 1991). Religious beliefs may involve rituals such as specific prayers, meditation, or candle lighting as ways of coping with adversity. Religious beliefs may forbid certain responses as impious or immoral such as getting angry, using alcohol, or asking others outside the family for needed resources. Cultures also differ greatly in their beliefs about fate and the need to accept what fate decrees. These beliefs affect appraisals of coping options (Slavin, et al, 1991).

It has been found that coping strategies used more often than not by both male and female members of oppressed ethnic and class groups are emotion-focused. A person's individual experiences of sanctions against certain coping strategies and the related experiences of group members may affect his/her appraisal of the usefulness of a given coping strategy. For example, members of oppressed minority groups may learn to accept the belief that "you can't fight city hall" (Slavin, et al, 1991).

Evidence presented in the literature suggests that blacks are more vulnerable to stress and they are more likely to encounter the stress producing factors of poverty, ill health, and low education than whites (Aldwin & Greenberger, 1987; Brown & Haris, 1978; Kessler, 1979). It has therefore seemed reasonable to assume that blacks and whites probably utilize different coping strategies and resources. Studies by both Veroff, Douvan, and Kulka (1981) and Neighbours, Jackson, Bowman, and Gurin (1983) buttress this assumption. Neighbours, Jackson, Bowman, and Gurin (1983) investigated

the stressors that blacks faced and the various coping strategies used to adapt to those stressors. From a nationally representative cross sectional sample, 2,107 adult blacks were interviewed. Measures of self-reported problem severity, problem type, coping and help seeking were collected. Results indicated that blacks are more likely to use emotion-focused coping strategies. Since blacks are seen to have a higher level of stress these findings are consistent with the findings of Anderson (1976, 1977) which show that at higher levels of stress, individuals abandon problem-focused coping and turn to emotion-focused coping strategies. These studies, however, fail to make comparisons between the types of stressors that are encountered by blacks and whites. Many of the blacks in these studies were subject to stressors such as poverty, ill health, and poor education. Many whites may be subject to similar stressors and it would be enlightening to compare these individuals.

A study that moved research in this direction was conducted by Stroman and Seltzer (1991). They explored how race was related to attempts to cope with occupational stress. A telephone survey of 195 blacks and whites in the District of Columbia assessed occupational stressors and coping strategies through open-ended questions. Results indicated that blacks and whites utilized a wide variety of strategies and that they used similar strategies to cope with somewhat different occupational stressors. It must be remembered, however, that the whites occupied higher level jobs and had a higher standard of education than the blacks. Although this was statistically controlled for in the analysis, future research should be conducted on populations where the different ethnic groups studied are in jobs at the same level.

What little is known about racial differences in coping with job stress has been found almost exclusively in comparisons of the blacks and whites in America. In the review of the literature, nothing was found on how Maori or Polynesian people coped. The present study attempts to further the knowledge in this area by looking at how the different ethnic groups in the sample cope with the pressures at work.

COPING BY ALTERATION OF COGNITIVE APPRAISAL

The occurrence of stress relates to a perceptual imbalance between demand and capability. Individuals often feel that they do not have the capability to meet the demand. Techniques used to manage this stress, hence, often involve the alteration of perceptual mechanisms (Cox, 1978). The perception of the three aspects of cognitive appraisal; demand, capability, and the importance of coping may be altered (Cox, 1978). Modification can be brought about through the use of religion, nicotine, caffeine, and alcohol.

Substance use may function as a general palliative device making an individual feel better so that the stressful episode is more bearable (Ratliff-Cain & Baum, 1990). In contrast some substance use may also serve to promote direct problem-focused coping, because some of the drugs may enhance performance and/or confidence in one's performance, thereby facilitating coping (Ratliff-Cain & Baum, 1990).

The substance used may vary depending on what is available, what is sanctioned by the culture and the degree to which one is willing to engage in deviant and possibly, self-destructive behaviour (Hadaway, Beyerstein, & Kimball, 1986).

1] ALCOHOL AND COPING

Under the effects of alcohol the person is free of feelings of anxiety, depression, and incompetence (Cox, 1978). Many use alcohol to relieve a sense of personal inadequacy and it has been suggested that this relief may result from a release from the inhibitory control normally exerted over behaviour by the higher centres of the brain (Cox, 1978).

Numerous surveys have shown that both social and problem drinkers expect to relieve tension, anxiety, and other stress-engendered negative emotions and to promote relaxation (Cooper, Russell, Skinner, Frone, & Mudar, 1992). Hence, stress related drinkers drink to allay anxieties and depression. In small doses, it can help you to relax and to lessen anxieties and fears (Rudinger, 1988). Drinking more can be a sign of

increased stress. Many individuals start drinking whenever potentially stressful situations loom (Rudinger, 1988).

Correlational studies of motives for drinking have consistently shown that from 10 to 20 percent of drinkers report drinking to cope with or regulate negative emotion (Cahalan, Cisin, & Crossley, 1969; Farber, Khavari, & Douglas, 1980; Mulford, 1983).

Many, if not most individuals, believe that alcohol reduces negative emotions and a substantial minority of drinkers indicate that they use alcohol strategically to cope with negative emotions (Cooper, Russell, Skinner, Frone & Mudar, 1992).

Alcohol use serves as a general coping mechanism invoked when other, presumably more effective coping responses, are unavailable. Hence, individuals who lack effective alternative coping responses are more likely to drink in response to stressful situations or circumstances (Cooper et al, 1992).

Sex differences in the use of alcohol have been examined in a number of recent reviews (Ferrence, 1980; Fillmore, 1984; Leland, 1982). The overwhelming consensus is that alcohol is used more often and more heavily by men than by women (Biener, 1987; Fillmore, 1984; Hilton, 1987; Wilsnack, Wilsnack, & Klassen, 1984). When comparing males to females, there are three to four times as many heavy drinkers, problem drinkers, and alcoholics. This may have something to do with the fact that drinking is more socially acceptable for men than women (Copperstock, 1971; Thompson & Wilsnack, 1984).

This may be because women have been socialized to internalize distress (Cooper et al, 1992). Hence, women are more prone to internalize stress related effects whereas men are more likely to use alcohol and exhibit alcohol-related problems as a result of exposure to stressful circumstances (Cooper et al, 1992). This is supported by findings showing that men were more than twice as likely (16 percent versus 6 percent) than women to report using alcohol to cope with negative emotions (Parry, Crisin, Balter, Mellinger & Manheimer, 1974).

Timmer, Veroff, and Colten (1985) using a national probability sample survey, investigated the tendency to use alcohol. They asked "when you feel worried, tense, or nervous do you ever drink alcoholic beverages to help you to handle things?" More men than women reported using alcohol to relieve tension (29% versus 16%).

Cooper et al (1992) found that stressors were highly predictive of both alcohol use and drinking problems among men who relied on avoidant forms of emotion coping or held strong positive expectancies for alcohol effects. Job stress has been clearly identified as one of the main causes for men drinking (Rudinger, 1988). However, this is not so for women. Future research needs to be conducted to investigate whether men do in fact report higher alcohol consumption than women in response to stress.

2] CAFFEINE AND COPING

Caffeine is a mild stimulant that results in increased blood pressure and catecholamine levels (Graham, 1978). Part of its utility in dealing with stress is its ability to increase alertness and decrease fatigue, making one more able to meet the challenge at hand (Ratliff-Cain & Baum, 1990). Since consumption of caffeine in the form of tea or coffee is more socially acceptable than alcohol consumption for women, it would be expected that women would have a higher tea/coffee intake, in times of stress, than men. No studies were found that specifically addressed this assumption. Future research in this area is needed before clearer conclusions can be made.

3] SMOKING AND COPING

Under stress, many smokers find the number of cigarettes they buy going up rapidly (Rudinger, 1988). Some smokers find their habit so sensitive to stress that they can gauge the stressfulness of a situation by their cigarette consumption. Cigarettes may help to lessen the emotional impact of stress, but at a high cost in terms of medical consequences (Rudinger, 1988).

It has been shown that one of the main reasons that individuals smoke is to reduce the stressful feeling of tension, anxiety, and anger (Rudinger, 1988). Other reasons are to relieve boredom, for pleasurable relaxation, or for stimulation.

Sex differences in smoking have also been examined. Smoking by women was once frowned upon, but the gender based barriers to smoking seem to have vanished (Biener, 1987). Over the past thirty years the proportion of women who smoke has been approaching that of men. There has been some empirical verification of the notion that women are more likely to use cigarettes to cope with negative wellbeing than men. Women are more likely to say that they smoke in response to negative well being and that stressful events trigger a relapse when they quit smoking (Frith, 1971). Ikard and Tomking (1973) in one of the few published laboratory studies, manipulated affect and looked at the effect this had on smoking behaviour of male and female college students. A funny film and an upsetting film was shown to both 39 male and 15 female smokers. Students were categorized into those who smoked during the funny film only, during the upsetting film, during both films, or during neither film. Results indicated that a greater proportion of the women than the man smoked only during the upsetting film (79 percent versus 36 percent). This supports the hypothesis that women are more likely to smoke as a result of negative well being than men. However, this study relies on a small select sample. More research is needed that directly manipulates affect and observes differential smoking by men and women.

Evidence also shows that women excrete nicotine more rapidly than do men and, therefore, suffer greater drops in nicotine level during stressful periods hence requiring additional administration to maintain their desired mood. This suggests that cigarette smoking in the face of stress may be more common among women (Beckett, Gorrod, & Jenner, 1971; Silverstein, Kelly, Swan & Kozlowski, 1982).

The literature indicates that women rather than men will smoke in response to stress. Much of the research in this area was conducted some years ago. Current research is hence, needed especially since societies attitudes to smoking have changed over the last few years.

4] RELIGION AND COPING

According to Cox (1978), religions are very similar to certain forms of psychotherapy in the way they offer to alter cognitive appraisal. He suggests they provide sets of personal and social values and methods of self actualization which are consistent with one another.

Religious activities can range from occasional acts of worship and prayer to complex codes of conduct which govern the relationship between man and man, man and his environment, and man and his creator (Rudinger, 1988). The support given by religion is compounded by the existence of a corpus of shared beliefs which transcends rationality and can lend meaning and a structure to life, plus the feeling of belonging to a group of like-minded people.

In terms of the transactional model, religions offer relief from stress by altering the perception of demand, of capability and of the importance of coping (Cox, 1978). Although emotional gains obviously accrue from being religious, there is a distinct possibility that the psychological defence strategies recommended by the religion may impair realistic behaviour and may only be maintained at a cost to physical and psychological health (Cox, 1978). Hence the effectiveness of being religious in producing more-or-less immediate improvements in feeling may lead to psychological dependence. However, according to Cox (1978), this psychological technique appears to develop more realistic appraisals of the problem situation, build or rebuild self-confidence, suggest and practice possible coping strategies and change attitudes and priorities.

Religion, on the whole, has been neglected in research into coping with stress (Mattlin, Wethington, & Kessler, 1990). However, the few studies that do consider the role of religion find it to be important. Veroff, Douvan, and Kulka (1981) found that prayer significantly reduces stress-related depression. McCrae and Costa (1986) found "faith" to be rated as the single most effective coping strategy in dealing with loss events such as loss of a job or loss of a loved one.

Rothbaum, Weisz, and Snyder (1982) suggest that when a situation is viewed as uncontrollable, religion may be used as a means of gaining "secondary control", understanding, and, thereby, accepting the event, rather than focusing on the ways to change it. Religion may also contribute to the way people appraise daily hassles. For instance, a belief that God is directing one's life towards some special "goal" may help to make a tedious job more tolerable (Hathaway & Pargament, 1991).

In addition to these influences on primary appraisals of threat, challenge or loss, religion may contribute to the person's secondary appraisals about what can be done about the situation. For instance, a person may believe that he/she can turn to others in their congregation for advice and support if needed, or may feel that otherwise uncontrollable situations may be dealt with by spiritual practices such as prayer (Hathaway & Pargament, 1991). However, religion can also restrict the range of coping options a person is willing to consider. Religion can affect coping actively by providing people with a repertoire of coping strategies. People draw on social, interpersonal, cognitive, spiritual, and behavioural aspects of their faith to cope with problems (Hathaway & Pargament, 1991).

In the study by Mattlin, Wethington, and Kessler (1990) it was found that religion is adaptive in the same situations as positive reappraisal, although religion is more powerful than reappraisal and more consistently palliative. Along a similar line, the study by Neighbours, Jackson, Bowman, and Gurin (1983) found that use of prayer was an important coping response, with 44% of the respondents with a problem stating that this was the one thing they did which helped them the most. It was also found that the percentage of respondents indicating prayer as the most helpful coping response increases as problems become more serious (Neighbours, et al, 1983). Moreover, more females than males (50.7% vs. 30.2%) see prayer as most helpful. It must be remembered, however, that this population consisted of black Americans, only, suggesting that there may be cultural differences to be considered. The present study will make an attempt to see if this is in fact true.

PRESENT STUDY

Having reviewed the relevant literature, it was found that there were shortcomings in several areas. This study attempted to address some of these.

The initial focus of the study is to investigate the internal structure of coping in a blue collar population. No predetermined conceptual framework will be adopted. Using a Principal Components Analysis, dimensions will be allowed to emerge from subjects' responses to a 63-item questionnaire dealing with stress coping mechanisms.

Once the internal structure of coping in this blue collar population is identified, the second aim is to compare it with the five form structure that emerged consistently in the white collar populations studied by Dewe and Guest (1989). This five form structure consisted of relational task-oriented behaviour, emotional release, distraction, passive rationalization, and social support.

An investigation into the functional type of coping strategies used (emotion-focused versus problem-focused) will be made. McDonald and Koribik (1991) found that managers used problem-focused coping to deal with stress in the workplace. It has been found, however, that when individuals feel little control over the situation they resort to emotion-focused coping. It has also been found that women tend to use emotion-focused coping and men tend to use problem-focused coping.

Sex differences in coping strategies used by males and females will be investigated. The strategies used in this analysis will be the components identified in the Principal Components Analysis. Folkman and Lazarus (1980) suggest that sex differences in coping may be attributable to women being in lower level jobs that limit the types of coping strategies that can be used. McDonald and Koribik (1991) examined sex differences in managers to see if differences existed when comparing men and women in jobs of the same level. They found no sex differences.

Sex differences in both smoking, drinking, eating and prayer will be investigated. According to Timmer, Veroff, and Colten (1985), men are more likely to use alcohol to relieve tension (to cope) than women. Women, however, are more likely to use caffeine in the form of tea or coffee to cope with stress than men (Graham, 1978). It is more socially acceptable for men to drink alcohol than for women, hence women resort to other more socially acceptable means of coping such as the consumption of tea or coffee or smoking (Cooperstock, 1971).

Frith (1971) found that women are more likely to say that they smoke in response to negative affect and that stressful events trigger a relapse when they quit smoking. Ikard and Tomking (1973) found evidence to support this. Biener (1987) noted that in the absence of perceiving the power to change the situation, women may resort to self consoling behaviours like eating, smoking, or shopping.

Women are more likely to eat in response to stress (Biener, 1987) than men. In a national survey of women, overeating was one of the main ways respondents used or considered using to deal with stress.

Women and minority groups tend to use emotion-focused coping strategies (Billings & Moos, 1980). Since prayer is an emotion-focused coping strategy, women are more likely to use prayer in response to stress (Veroff, Douvan, & Kulka, 1981).

Differences in coping among the different ethnic groups will also be investigated in this study. Using the components identified in the Principal Components Analysis as coping strategies, comparisons will be made between the different ethnic groups. Pearlin (1989) cogently noted "elements of coping may be learned from one's membership and reference groups in the same ways as other behaviours are learned and internalized". Slavin, Rainer, McCreary, & Gowda (1991) found that both male and female members of oppressed ethnic and class groups are emotion-focused copers.

Neighbors, Jackson, Bowman, & Gurin (1983) found that use of prayer was an important coping resource for blacks in America. They found that it was the one thing that helped

them most as their problems became serious. This use of prayer indicates how important religion and the church are in the black community. Since the church is an important part of Pacific Islanders' family and community it is thought that prayer will be used as a coping strategy more by this ethnic group than by some other ethnic groups. This will be investigated.

RESEARCH AIMS AND HYPOTHESES

- 1] To identify the internal structure of coping and to compare them with the components found in the white collar populations investigated by Dewe and Guest (1989).
- 2] To examine gender differences in coping strategies. From previous literature the following hypotheses were investigated.
 - a] No significant difference will be found between the coping strategies employed by males and females in this blue collar population.
 - b] Men will use alcohol significantly more as a method of coping with stress than women.
 - c] Women will use smoking significantly more as a method of coping with stress than men.
 - d] Women will use tea or coffee significantly more as a method of coping with stress than men.
 - e] Women will use eating significantly more as a method of coping with stress than men.
 - f] Females will use prayer more as a means of coping than males.

- 3] To assess whether emotion-focused coping was used more than problem-focused coping in this blue collar sample. It was hypothesized that:
 - a] Emotion-focused coping will be used significantly more than problem-focused coping in this blue collar population.

- 4] To examine ethnic differences in coping strategies. Again, based on previous literature it was hypothesized that:
 - a] Individuals belonging to a certain ethnic group will use different coping strategies to individuals belonging to other ethnic groups.

 - b] Individuals from ethnic minorities will be more likely to use prayer as a means of coping than individuals that are not from ethnic minorities.

 - c] Emotion-focused coping strategies will be used significantly more by ethnic minority groups to cope with the pressures of work than by non-minority groups.

CHAPTER 3

METHOD

SUBJECTS

The subjects consisted of 153 cleaners who worked for a national cleaning company, 66% of whom were females, 31% males, and 3% unknown. They were aged between 15 and 69 years, the mean being 37 years. The vast majority (63%) of subjects were Pakeha, 21% were Maori, and other ethnic groups made up the remaining 12%. Four percent of the subjects did not respond to this question. Sixty one percent of subjects were married (or living as married), 14% single, and 14% were separated, divorced or widowed. Eleven percent were of unknown marital status due to non-response to this question. Sixty percent had children living at home.

The number of hours subjects worked per week as a cleaner ranged from 3 to 50 hours, the mean being 26.5 hours. Twenty one percent of subjects had a second job with the number of hours worked in this secondary paid employment ranging from 2 to 45 hours per week, the average being 23. Five percent of subjects were engaged in secondary or tertiary study. Length of service ranged from 2 days to 16 years, with a median of 3.

The present study utilized an opportunity sample, thus limiting the generalizability of results. From a national cleaning company, six regions were sampled. Regions were selected to give a representative overview of the company. Main regions in both the North and South island were sampled along with smaller more rural areas. This gave a mix of both large city sites and smaller town sites.

Of the 183 people approached, 96% agreed to participate. The 4% non-respondents consisted of individuals who did not have time to fill in the questionnaire due to a tight work schedule, had forgotten their reading glasses and hence were unable to read the questionnaire, or were simply uninterested. Unless it was very obvious that the person approached would have considerable difficulty with the questionnaire (some individuals had English as a second language and found it difficult to read written English) he/she

was encouraged to participate. From the 175 people who agreed to participate, 87% of the questionnaires were returned to the researcher.

DATA COLLECTION: CHOICE OF RESEARCH STRATEGY

When measuring coping, researchers will always have to face the issue of self-report versus observational and inferential techniques (Folkman and Lazarus, 1980; Gisdorfer, Cohen, Kleinman, and Maxim, 1981). In this study it was decided that a self-report measure would be used for several reasons. Firstly, self-report techniques are generally recognized and accepted as a means which yield important information (Dewe, 1991). Secondly, self-report techniques are appropriate because not all coping is manifest in observable behaviour as it can include intra-psychic processes (Dewe and Guest, 1990). That is, people may engage in coping behaviours that cannot be observed. Hence, to obtain a true picture of all the coping techniques used by an individual, self-report would be required.

However, self-report is not without limitations. Coping may not be a fully conscious process, making self-reports liable to errors of omission and distortion (Dewe and Guest, 1990). Self-report is also limited in its ability to identify coping behaviours that are anti-social (Latack, 1986; Kasl and Cooper, 1987; Dewe, 1985), those that the individual is not prepared to talk about (Dewe, 1985), and those they are not aware of (Dewe, 1985; Dewe and Guest, 1990).

It has also been noted that the colloquial meaning of the word "cope" may introduce a bias towards only successful strategies being reported (Dewe, 1985). To limit the effect of this, no mention of "coping" was used when administering the questionnaires. Instead, individuals were asked to consider each of the statements listed and consider the extent to which they used each one to deal with pressures at work.

QUESTIONNAIRE

The questionnaire (see appendix 3) consisted of two parts, a coping measure and demographic information.

1) COPING MEASURE

Coping strategies were measured using an adapted version of the Dewe and Guest (1990) 63-item coping checklist. This checklist was developed from reports of how people coped with work related stressors and stress (Dewe, 1991).

In the original development of the protocol, open-ended interviews were conducted asking individuals, "Can you think of a time at work when you felt under stress? Can you tell me how you coped with it?" and "If, like most people, you occasionally get particularly fed up with your job and feel tense and frustrated, how do you cope?" No time scale was imposed on the grounds that although there was a risk of loss of accurate recall of events occurring some time ago, there was an equal risk of failure to take a sufficiently distanced and dispassionate view of very recent incidents. The rationale behind asking the two types of question was to identify a range of coping techniques associated both with specific problems and with more general feelings of discomfort (Dewe and Guest, 1990).

A checklist of 47 coping techniques was generated from a content analysis of responses. The questionnaire checklist was given to 51 administrators with the question "Please consider each statement in the list below and indicate how frequently you use such actions to cope with the pressures at work" (Dewe and Guest, 1990). Responses were measured on a five-point scale ranging from "never" to "always".

Those taking part in this stage also responded to an open-ended question asking "What sort of things do you do or what actions do you take to cope with stress at work?"

→ Content analysis of responses to these questions resulted in a decision to add a further 16 items, many of which had been identified at an earlier stage but had been discarded because of insufficiently precise articulation.

The final version of the questionnaire asked the same questions and consisted of a 63 item checklist. The advantage of this measure is that it contains a broad range of strategies and has been specifically derived for use in a work setting.

This questionnaire was examined and adapted to fit the population used in the present study. All questions that were not of relevance to the population of cleaners were omitted, such as; leave your desk and go to another part of the office for a while, or take some of your work home and work on it there. These questions did not apply to cleaning personnel as they were things that the cleaners could not do due to the nature of their work. Other questions were reworded to make more sense for the population they were to be used on. For example, "leave the office and go home early" became "leave and go home early". Some of the questions were reworded to make the question simpler and easier to understand. This was done because a reasonable proportion of the population had limited ability in understanding English.

A total of thirteen questions were reworded slightly. These included, try to think objectively about the situation and keep your feelings under control, do not let the problem go until you have solved it or reconciled it satisfactorily, take some immediate action on the basis of your present understanding of the situation, take feelings out on staff or whoever happens to be around, express your feelings and frustration to others so that you can think rationally about the problem, talk things over with your wife/husband when you get home at night, face the situation knowing that your family and wife/husband give you a sense of proportion to the problem, ignore for a time the apparent problem until you feel ready to handle it, make a concerted effort to distract yourself with some fun or pleasurable activity, decide to go out with the family or friends and enjoy yourself, forgetting about work problems for a time, just become more involved in family life helping with wife/husband and children, leave the office and go home early, become more involved in non-work activities, and hobbies, leisure, etc. Several items were taken out of the questionnaire. These were, take some of your work home and work on it there, leave your desk and go to another part of the office for a while, just let the feeling wear off, and do nothing and try to carry on as usual. Since all of the changes were relatively minor and merely aimed at clarification of wording,

the resulting 52-item checklist was considered to have the same intent and was, therefore, comparable to the original (see results).

2] DEMOGRAPHIC INFORMATION

Demographic data obtained in the questionnaire included gender, age, ethnicity, marital status, religiosity, whether the subject had children living at home and if so, how many and their ages, hours worked per week as a cleaner, length of service, hours worked at other paid employment, and whether they were still completing secondary or tertiary studies.

ETHICAL CONSIDERATIONS

The study involved no deception of subjects.

The main ethical consideration was the storage and use of the data. Several steps were taken to ensure the ethical matters were dealt with appropriately:

- [1] Informed consent was obtained. This was done in two ways. Firstly, subjects agreed to participate. Secondly, they signed a consent form (see Appendix 2).
- [2] Subjects were ensured confidentiality. They would be providing information on the understanding that it would not be possible to identify any individual in any reports of the results.
- [3] Subjects provided information on the understanding that the researcher would be the only person to see the completed questionnaires (that is, their boss would not have access to the completed questionnaires).

The procedure and ethical considerations were discussed and approved by the Massey University Ethics Committee.

PILOT STUDY

Twenty individuals participated in a pilot study for which there were three main objectives. Firstly, the pilot study was conducted to see whether the questionnaire had face validity. Did the population in question find the questions relevant to them? After subjects filled in the questionnaire, they were asked what they thought about the questionnaire; was it relevant to them? They indicated that it was, stating that they had engaged in most of the behaviours listed at some stage or another.

Secondly, it was designed to determine whether any coping strategies had been omitted. Were there certain ways of coping used by this group that had not been identified. Individuals were asked to list anything that they did to cope with work problems that was not mentioned in the questionnaire. Nothing was added.

Thirdly, the aim was to determine whether the scale was understandable. Did subjects understand the scale and how it worked? After completion of the questionnaire subjects were asked for their opinions on how easy the scale was to understand. It was found that the scale was not easy to understand and that more anchor points were required on the response scales. For the final questionnaire each point on the scale was given an anchor (label 1 = never, 2 = sometimes, 3 = quite often, 4 = regularly, 5 = always).

PROCEDURE

Data was collected over a period of 8 weeks from early May 1993 to mid July 1993. The questionnaire was administered by the researcher in each of six regions. The same data collection procedure was used for all sites.

In the first instance, the researcher approached the cleaning company's National Training Officer for potential respondents, and was supplied with information about whom to contact in each region. The researcher, on contacting Regional Managers, was given the information needed to access subjects.

Respondents were approached in their place of work. This involved visiting work sites both during the day and at night. It was felt that by obtaining both day and night cleaning personnel, the sample would be more representative. It was also felt that visiting cleaners on site and allowing them to complete the questionnaire in paid work time would improve the response rate. An information sheet (see appendix 1) identifying the researcher and outlining the study was presented to each individual on the site. Cleaners who agreed to participate were then asked to complete a consent form (see appendix 2). The questionnaire was distributed and subjects given the opportunity to ask questions. Subjects typically spent about 20 minutes on the questionnaire and generally needed little assistance.

FEEDBACK

Feedback was given to subjects in February, several months after the last batch of data was collected. This was to inform subjects of the tentative findings of the study (see Appendix 4).

CHAPTER 4

RESULTS

DATA ANALYSIS

Principal Components Analysis (P.C.A) was used to answer the first research question. One aim of the study was to identify the internal structure of the coping measure by allowing dimensions to emerge from the statistical analysis rather than testing for a predetermined conceptual framework. Exploratory Principal Components Analysis allows for tentative theories to be examined where no specification of the number of factors and the number of variables that load on each factor are made (Ferguson & Cox, 1993). Another reason for using this method was to enable a comparison to be made with results from the studies by Dewe and Guest (1990) who used a similar method of analysis.

Exploratory P.C.A is a statistical technique applied to a single set of variables where the researcher is interested in discovering which variables in the set form coherent subsets that are relatively independent of one another (Tabachnick & Fidell, 1989). The major goal is the identification of the minimum number of common factors required to reproduce the initial correlation matrix such that it extracts the maximum amount of variance (Ferguson & Cox, 1993; Tabachnick & Fidell, 1989).

Linear Discriminant Analysis was used to investigate sex and ethnic group differences. The purpose of Discriminant Analysis is to predict group membership from a set of predictors (Tabachnick & Fidell, 1989). Here we wish to know whether group membership produces reliable differences on a combination of dependant variables. Using the components found in the P.C.A, Discriminant Analysis was conducted to see if any linear combination of components discriminated between sex, or discriminated between the different ethnic groups. That is, using any combination of the coping components, can an individual's sex or ethnic group be predicted?

An Analysis of Variance was used to examine the differences between the ethnic groups on each of the components identified in the P.C.A. This procedure considers more than two samples at one time (Chase, 1984). Analysis of variance, however, only indicates if a significant difference occurs, it does not indicate where the significant difference lies. Therefore, a post-hoc Scheffe test was used for this purpose.

The Scheffe test is a multiple comparison test that compares category means. It is a conservative test for pairwise comparisons of means, corrected for the fact that the comparisons are not statistically independent. That is, it requires larger differences between means for significance than most other methods. Using the component structure found from the P.C.A, this test was used to explore differences between the ethnic groups.

T-tests were calculated to see whether problem-focused or emotion-focused coping strategies were used more frequently and whether there was a difference between males and females. Because these hypotheses involve more than one t-test, the possibility of type I error must be considered. As the number of hypotheses being tested increases, the risk of obtaining positive results on the basis of chance alone (type I error) increases (Grove & Andreassen, 1982). The various statistical tests commonly used were developed to test a single hypothesis. According to Grove and Andreason (1982), applying them to 100 variables simultaneously at the .05 level, as is often done using statistical packages, will give positive results for an average of five variables by chance alone.

The traditional approach to this problem has been to make the significance test more conservative either by changing the criterion to a more stringent value, such as 1 percent level instead of 5 percent, or by actually inflating the calculated p-values by some factor that depends on the number of comparisons made (Rothman, 1986; pp.148). Rothman (1986) suggests, however, that this solution may not be an improvement. He argues that significant results found when doing multiple t-tests are not found by chance and are hence not type I errors as suggested by Grove and Andreason (1982). Moreover, by making the screening criterion for statistical significance more stringent, a penalty is paid, in that, real significant differences may go undetected resulting in type II error

(Rothman, 1986). Since only a small number of t-tests were run successively in the present analysis, the type I error rate was likely to be quite small and it was decided not to make an adjustment as discussed above.

Single t-tests were used to investigate whether several of the hypotheses were supported. These included such things as whether men used alcohol more than women to cope and whether women used prayer more than men. Finally, t-tests were used to investigate differences in emotion-focused and problem-focused coping. Do males use significantly more problem-focused coping methods than females? Did this sample as a whole use more emotion-focused coping than problem-focused coping?

For clarity, the results will be presented in the order in which they were conducted, regardless of the order of the hypotheses.

Prior to analysis, all variables were examined using the statistical package for the Social Science (SPSSPC) for accuracy of data entry, missing and outlying values. Listwise deletion was used to eliminate any cases with missing data except in the Principal Components Analysis where mean substitution was applied. Outliers were removed from the sample, an outlier being any individual that scored more than three deviations from the mean.

ANALYSIS 1

In the first stage of the analysis t-tests were used to see if there were significant differences in the way males and females answered certain questions on the questionnaire. That is, were there sex differences in these particular coping strategies? Of the five strategies listed in table 1 "Praying more in response to stress" produced a significant difference ($t=-2.02$, $p<0.05$). This indicated that females pray significantly more than males in response to stress. Table 1 lists the means, standard deviations, and t-values calculated.

TABLE 1: SEX DIFFERENCES IN INDIVIDUAL COPING STRATEGIES

	MALE			FEMALE			t-VALUE
	n	mean	SD	n	mean	SD	
EAT MORE	45	1.93	1.25	98	1.86	1.17	0.35
HAVE A FEW DRINKS	45	1.71	1.04	101	1.55	0.94	0.90
SMOKE MORE	45	1.82	1.39	99	1.80	1.25	0.10
PRAY	44	1.48	0.90	98	1.93	1.35	-2.02*
DRINK MORE TEA/COFFEE	45	1.98	1.12	96	1.92	1.12	0.30

* significant at $p < .05$

Frequencies indicate how often individuals report using each of the following five strategies, eat more, have a few drinks, smoke more, pray, and drink more tea/coffee to cope with the pressures at work. One indicates they never use the strategy, two indicates they use it sometimes, three indicates they use it quite often, four indicates that the strategy is used regularly, and a five indicates that the strategy is always used. From Table 2 and Table 3 it can be seen that most individuals report never or sometimes using these strategies. However, a proportion of respondents indicated that these strategies were used quite often, regularly or always to cope with pressures in the workplace, confirming the relevance of the items listed in the questionnaire.

TABLE 2: MALE REPORTED FREQUENCY USAGE OF SPECIFIC INDIVIDUAL COPING STRATEGIES

	REPORTED USAGE OF THE STRATEGY				
	1	2	3	4	5
EAT MORE	47.8%	30.4%	6.5%	4.3%	8.7%
HAVE A FEW DRINKS	50.0%	39.1%	21.2%	-	6.5%
SMOKE MORE	60.9%	21.7%	-	2.2%	13.0%
PRAY	65.9%	29.5%	-	-	4.5%
DRINK MORE TEA/COFFEE	37.8%	44.4%	6.7%	4.4%	6.7%

TABLE 3: FEMALE REPORTED FREQUENCY USAGE OF SPECIFIC INDIVIDUAL COPING STRATEGIES

	REPORTED USAGE OF THE STRATEGY				
	1	2	3	4	5
EAT MORE	49.5%	29.7%	5.9%	5.9%	5.9%
HAVE A FEW DRINKS	63.0%	26.7%	5.0%	1.0%	4.0%
SMOKE MORE	57.4%	23.8%	5.0%	3.0%	8.9%
PRAY	56.1%	21.4%	7.1%	4.1%	11.2%
DRINK MORE TEA/COFFEE	44.8%	34.4%	11.5%	3.1%	6.3%

T-tests were also employed to see if ethnic minority members used prayer significantly more than individuals from the majority group (Pakehas). The results indicated no significant difference in mean "pray" score between Pakeha ($M = 1.692$) and Maori ($M = 2.03$), $t(122) = -1.32$, ns or between Pakeha ($M = 1.692$) and Other ($M = 1.889$), $t(110) = -0.64$, ns.

ANALYSIS 2

To ensure that the data was suitable for Principal Components Analysis it was screened for univariate and multivariate outliers. At the univariate level any subject with a z-score of more than plus or minus 3 on any variable was classified as an outlier and removed from the sample. At the multivariate level there were no outliers. Univariate distributions were inspected to ensure there were no marked deviations from normality and that the correlation matrix revealed potentially interpretable information. Bivariate scatterplots indicated that the data met the criteria of linearity.

When an initial P.C.A was conducted the number of cases was reduced to 74. To ensure the maximum number of cases, mean substitution was used as this does not alter the loadings on the components. Components with eigenvalues greater or equal to one were then extracted using varimax rotation and considered in relation to a scree test. This indicated a clear cutoff at five factors.

The ratio of sample size to variables being analysed in this study is less than the generally accepted rule of thumb of 1 to 10. Unfortunately, as Gorsuch (1983, p332) points out "no one has worked out what a safe ratio of the number of subjects to variables is, probably because it varies depending on the strength of the phenomena". The conclusion drawn by Gorsuch (1983) is that where the phenomena are relatively robust the important guide is not the ratio as such but that for any analysis the sample size should not be less than 100. Comrey (1978), Kline (1986), and Tabachnick and Fidell (1989) have also supported this idea of an absolute minimum number of subjects being between 100 and 200. Components were described by considering loadings in descending order (Child, 1970). Where variables had a loading of 0.3 or greater on more than one component, then it was assigned to the component on which it had the highest loading.

TABLE 4: DETAILS OF PRINCIPAL COMPONENTS ANALYSIS WITH VARIMAX ROTATION FOR THE FIVE COMPONENTS

	COMPONENT				
	1	2	3	4	5
EIGENVALUE	6.36	4.00	2.90	2.61	2.35
PERCENT OF VARIANCE	12.20	7.70	5.60	5.00	4.50
MEAN	2.80	0.98	2.40	3.08	0.83
STANDARD DEVIATION	0.69	0.42	0.53	0.78	0.74
RELIABILITY COEFFICIENT	0.83	0.60	0.58	0.63	0.54

The P.C.A of the 52 coping strategies revealed 5 components accounting for 35.1% of the variance. Eigenvalues for the five components were 6.4, 4.0, 2.9, 2.6, and 2.4 respectively, explaining 12.2 percent, 7.7 percent, 5.6 percent, 5.0 percent, and 4.5 percent of variance. Table 4 above, shows the eigenvalues and percent of explained variance and other related statistics for each of the five components. Variables associated with each component are set out in table 5.

TABLE 5: ITEMS AND LOADINGS ON EACH OF THE FIVE PRINCIPAL COMPONENTS.

Items	Loading
COMPONENT 1: RATIONAL TASK ORIENTED BEHAVIOUR AND PREPARATION TO DEAL WITH THE PROBLEM.	
Consider a range of plans for handling the situation - set priorities.	0.576
Whenever possible give your opinion about how things are done and the way things are going at work.	0.566
Face the situation knowing that your family and partner gave you help and a sense of proportion.	0.556

Items	Loading
Tackle routine work so that you can cool down and get your composure back.	0.547
Try to find out more about the situation (eg. seek additional information).	0.522
Try to reassure yourself that everything is going to work out all right.	0.519
Draw on support from your boss. Discuss the problem with him/her.	0.506
Get mad with yourself and tell yourself that you could have avoided the situation.	0.493
Think about it and be prepared for the worst.	0.485
Try to get as much rest as possible so you can be fresh and alert for work.	0.478
Move on to other work activities that you know that you will get satisfaction from.	0.474
Don't let the problem go until you have had a chance to deal with it.	0.465
Think about your next lot of work and hope it will be better than the present.	0.463
Follow proper channels of procedure to cover yourself.	0.456
Get advice and suggestions from someone else at work.	0.445
Try to introduce some variety into your job.	0.441
Throw yourself into work and work longer and harder.	0.435
Make people aware you are doing your best.	0.417
Take some immediate action.	0.402
Talk things over with your partner when you get home at night.	0.397
Just become more involved in family life, helping with partner and children.	0.385
Leave work and go home early.	0.382

Items	Loading
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COMPONENT 2: EXPRESSION OF EMOTION AND AVOIDANCE

Cover up problems rather than deal with them.	0.548
Just avoid the problem.	0.503
Eat more.	0.460
Just give up and accept whats happening.	0.431
Take feelings out on workmates or whoever happens to be around.	0.420
Let people know exactly where you stand.	-0.406
Take day off.	0.396
Don't think clearly about the situation and don't keep feelings under control.	0.373
Spend more time daydreaming.	0.345

COMPONENT 3: ATTEMPTS TO TOLERATE OR MITIGATE THE EFFECT.

Take a break and come back to the problem later.	0.524
Go and have a few beers or other drinks.	0.512
Forget work when finished for the day.	0.386
Try not to worry or think about it.	0.318

COMPONENT 4: DISTRACTION BY USE OF PLEASURABLE ACTIVITIES.

Try to see the humorous aspects of the situation.	0.433
Think about the good things in the future.	0.426
Make an effort to distract yourself with some fun or pleasurable activity.	0.420
Get support from the fact that not all problems can be solved at a national level.	0.327

Items	Loading
COMPONENT 5: EMOTIONAL RELEASE.	
Get rid of tension by expressing some irritability and frustration to yourself.	0.666
Pray.	-0.455
Lose temper for a moment.	0.425

As can be seen from table 5, the first component contains rational task oriented behaviours and behaviours that prepare the individual to deal with the problem. These include steps to deal directly with the stressor (for example, set priorities, seek additional information, take immediate action, don't let the problem go until you have had a chance to deal with it); responses which might facilitate direct action by reducing anxiety or panic (for example, be prepared for the worst, reassure yourself that everything is going to work out all right) and actions designed to prevent subsequent repercussions (for example, wherever possible give your opinions, work longer and harder, let people know where they stand). Another part of this component is the notion of returning to the problem after a break when you feel ready to handle it (for example, tackle routine work so you can cool down) or to take some action which enables you to deal with the problem more effectively in the future (for example, face the situation knowing that your family gave you a sense of proportion, draw on support from your boss, discuss the problem with him/her, try to get as much rest as possible so you can be fresh and alert for work, get advice and suggestions from someone else at work, talk things over with partner at night)

The second component consists of attempts at avoidance or in the expression of emotion. This includes avoiding the problem (for example, covering up the problem, avoiding the problem, taking the day off); participating in a pleasurable activity (for example, daydreaming, eating). Expression of emotion is also contained in this

component. This includes items such as, taking feelings out on workmates, not thinking clearly and not keeping feelings under control.

The third component could be described as attempts to tolerate or mitigate the effect. This includes passive attempts to tolerate the effect, such as, try not to worry or think about it, forget work when finished for the day. Also included here are attempts to tolerate the effect, such as, going and having a few beers or other drinks.

The fourth component distracts attention away from the particular issue by use of pleasurable activities (for example, thinking about the good things in the future, see the humorous aspects of the situation, distract yourself with a fun or pleasurable activity).

The fifth component could be described as emotional release. This includes expressing irritability and losing temper.

A major aim of this study was to explore the consistency with which the same set of factors emerge across different populations. The blue collar population was compared to the four populations used in the study by Dewe and Guest (1990). Their study of coping was the central feature of a larger investigation of stress while in the present study, coping was the only feature investigated. Lists of coping techniques were generated for each of the five populations studied. This was done to reflect the specific context in which each worked. Predictably, there was a certain amount of overlap and some items are common to all five studies. In the present study, considerable overlap in items existed and other items required minor variations in wording to reflect the specific circumstances of the present population. A Principal Components Analysis with varimax rotation was conducted in each study and the individual items, or coping strategies were grouped into components or coping styles.

The comparison across the five populations, summarised in Table 6, indicates that four components are common to at least four of the samples despite the fact that individual coping strategies were very different. Some components, such as rational task-oriented behaviour and emotional release can be labelled with confidence for each sample for

which they emerge. Others, such as social support, describe a general category within which there are variations according to whether this is provided at work or at home. For the nurses it is subsumed within the distraction and relaxation component.

TABLE 6: COMPONENTS OF COPING IN FIVE STUDIES

COMPONENT	MAIL ORDER SUPERVISORS (n=223) *63-item checklist *6 components *36.0% of total variance	NURSES (n=1801) *71-item checklist *6 components *32.4% of total variance	TEACHERS (n=800) *70-item checklist *6 components *31.0% of total variance	CHURCH MINISTERS (n=280) *65-item checklist *5 components *32.9% of total variance	CLEANERS (n=121) *52-item checklist *5 components *35.1% of total variance
DIRECT ACTION	Rational task oriented behaviour (10.9%)	Rational task oriented behaviour (12.7%)	Rational task oriented behaviour (6.2%) Use of strict discipline (4.3%) Make your position clear (2.8%)		Rational task oriented behaviour & preparation to deal with the problem (12.2%)
EMOTIONAL RELEASE	Emotional release (7.7%)	Emotional release (4.1%)	Emotional release (11.8%)		Emotional release 4.5%)
DISTRACTION	Postpone action by distracting attention (3.8%)	Distraction, relaxation & social support (6.4%)	Avoid over-involvement in work (2.7%)	Postpone action by relaxation & distracting attention (6.1%)	Expression of emotion and avoidance (7.7%) Distraction by use of pleasurable activities (5.0%)
PASSIVE RATIONALIZATION	Passive attempts to tolerate the effects (3.7%)	Passive attempts to tolerate the effects (3.0%)		Rationalize the problem (4.5%)	Attempts to tolerate the effect (5.6%)

	MAIL ORDER SUPERVISORS	NURSES	TEACHERS	CHURCH MINISTERS	CLEANERS
SOCIAL SUPPORT		Utilize home resources (5.8%)	Social support from colleagues (3.2%)	Social support (13.9%)	
PREPARATION	Recovery and preparation (4.1%)			Develop your capacity deal with the problem (4.8%)	
MISCELLANEOUS		Keep the problem to problem to yourself (3.4%) Palliatives (2.7%)		Support through spiritual commitment (3.5%)	

* Percent of variance accounted for by component.

Note. The data in column 1 to 4 are from "Methods of coping with stress at work: A conceptual analysis and empirical study of measurement issues" by P. J. Dewe and D. E. Guest, 1990, Journal of Organizational Behaviour, 11, p 142. Copyright 1990 by John Wiley and Sons, Ltd. Adapted by permission.

ANALYSIS 3:

A discriminant analysis was conducted to see if any linear combination of the five components discriminated between sex of the individuals in the sample. No significant effects were found. That is, individuals could not be classified into male or female categories by any combination of coping components.

In stage two of this analysis, the five components from the P.C.A were used to test sex differences and ethnic differences. Firstly sex differences were investigated. Did males cope significantly differently from females on any of the five components? The only significant difference found was on the positive distraction component ($t(103)=2.26$, $p<0.05$). This indicates that males use positive distraction significantly more than females. Table 7 lists the mean score of males and females on each component, the standard deviation, and corresponding t-values.

TABLE 7: SEX DIFFERENCES IN RATINGS ON ITEMS WITHIN EACH OF THE FIVE COMPONENTS ON THE COPING SCALE

COMPONENT	MALE			FEMALE			t-VALUE
	n	mean	SD	n	mean	SD	
DIRECT ACTION	32	2.85	2.85	59	2.83	0.60	0.17
NEGATIVE DISTRACTION	37	1.02	0.47	67	0.99	0.39	0.31
PASSIVE RATIONALIZATION	36	2.46	0.73	77	2.37	0.62	0.67
POSITIVE DISTRACTION	34	3.39	0.89	71	3.01	0.78	2.26*
EMOTIONAL RELEASE	36	1.02	0.69	78	0.74	0.76	1.88

* significant at $p < .05$

Secondly ethnic differences were investigated. Were there significant differences between the three different ethnic groups, Pakeha, Maori, and Other, on any of the five components obtained from the P.C.A, that is, did the ethnic groups use different coping

styles? There was a significant difference between ethnic groups on one component, namely, passive rationalization. Table 8 shows the F values and the significance of F for each of the five components.

TABLE 8: ETHNIC DIFFERENCES BETWEEN RESPONSES TO ITEMS ON THE FIVE COMPONENTS OF COPING SCALE

	DF	MEAN SQUARE	F	SIG.LEVEL
DIRECT ACTION	2	0.652	2.01	0.141
NEGATIVE DISTRACTION	2	0.411	2.41	0.097
PASSIVE RATIONALIZATION	2	1.524	3.42	0.038*
POSITIVE DISTRACTION	2	1.219	1.92	0.153
EMOTIONAL RELEASE	2	0.731	1.34	0.267

* significant at $p < .05$

To investigate further where the significant difference lay in the passive rationalization component, a Scheffe test was used to compare pairs of ethnic groups. No significant differences were obtained. This may be due to the fact that the Scheffe test is more stringent and the difference using the F-test was only just significant at the 0.05 level. The Scheffe test is typically linked with higher rejection rates (Chase, 1984).

ANALYSIS 4:

In the fourth stage of analysis coping strategies were grouped according to Folkman and Lazarus' (1980) classification of emotion-focused and problem-focused coping strategies. No differences were found between males and females on emotion-focused or problem-focused coping (Table 9).

TABLE 9: MALE/FEMALE USAGE OF EMOTION-FOCUSED AND PROBLEM-FOCUSED COPING

	MALE			FEMALE			t VALUE
	n	mean	SD	n	mean	SD	
PROBLEM-FOCUSED	33	3.01	0.53	64	2.28	0.56	1.05
EMOTION-FOCUSED	27	2.29	0.41	50	2.25	0.30	0.46

When males and females were combined, a very significant difference was found between the overall usage of problem-focused and emotion-focused coping within the total sample (Table 10). Significantly more problem-focused coping was used ($t=12.02$, $p<0.001$). To see if these differences were more pronounced in some ethnic groups than others, further t-tests were computed for Pakeha, Maori, and Other, separately.

TABLE 10: EMOTION-FOCUSED VERSUS PROBLEM-FOCUSED COPING STRATEGIES

	TOTAL N	MEAN	SD	t-VALUE
PROBLEM-FOCUSED	74	2.99	0.55	12.02*
EMOTION-FOCUSED	74	2.28	0.33	

* significant at $p<0.001$

Significant differences were found in the differences between problem-focused coping and emotion-focused coping in each of the ethnic groups. It can be seen that Pakeha, Maori, and Other all used significantly more problem-focused coping as compared to emotion-focused coping (Table 11).

TABLE 11: ETHNIC USAGE OF PROBLEM-FOCUSED AND EMOTION-FOCUSED COPING STRATEGIES

	PROBLEM-FOCUSED			EMOTION-FOCUSED			t-value
	n	mean	SD	n	mean	SD	
PAKEHA	64	2.95	0.51	64	2.31	0.35	10.21**
MAORI	17	3.03	0.76	17	3.34	0.35	5.04**
OTHER	7	2.83	0.55	7	2.08	0.43	2.89*

* significant at $p < .01$

** significant at $p < .001$

Several of the results from the present study support previous findings. These will be discussed in the next section. Those that did not support previous studies will also be discussed and ideas put forward as to why they were not supported.

CHAPTER 5

DISCUSSION

INTERNAL STRUCTURE OF COPING

As stated previously, the main aim of this study was to investigate the meaning of coping with job stress to blue collar workers by validation of a previously used measure of coping and further development of a taxonomy of coping strategies. Five components emerged when identifying the internal structure of coping. These five components were rational task oriented behaviour and preparation to deal with the problem, expression of emotion and avoidance, attempts to tolerate or mitigate the effect, distraction by use of pleasurable activities, and emotional release. These five components explain 35.1 percent of the variance. Considering the nature of coping these components are picking up as much variance as can be expected. Coping is a very personal and individual thing and everyone has specific ways of coping with pressures both at work and at home. Given the large individual differences, the coping strategies used by any given population are varied. Hence, the Principal Components Analysis groups together those strategies that are used most frequently. Other strategies are used but only by a few of the individuals. The variance accounted for in the present study compares favourably with that of previous studies by Dewe and Guest (1990).

It appears that individuals in this population use rational task oriented behaviour and preparation to deal with the problem, more than any other mechanism to cope with stress in their workplace. This factor accounts for over one third of the variance found in the present study.

Factor loadings of more than 0.30 were interpreted in the present study. However, it should be noted that the greater the loading, the more the variable is considered to be a pure measure of the factor. Comrey (1973) suggests that loadings in excess of 0.71 (50% of overlapping variance) are considered excellent. In the present study no variable loads on to a component at this level. A loading of 0.63 (40% overlapping variance) according to Comrey, is considered very good. One variable, namely, "get rid of tension

by expressing some irritability and frustration to yourself", in the present study loads onto the fifth component (emotional release) at this level. Loadings of 0.55 (30% of overlapping variance) is considered to be good. Three variables load onto the first component, rational task oriented behaviour and preparation to deal with the problem, at this level. These are "consider a range of plans for handling the situation - set priorities", "whenever possible give your opinion about how things are going at work", and "face the situation knowing that your family and partner gave you help and a sense of proportion". Any loading of 0.45 (20% of overlapping variance) is considered fair and any loading of 0.32 (10% overlapping variance) is considered poor. Therefore in the present study 17 strategies had loadings that were fair and the remaining 21 strategies had weak loadings.

The relatively low loadings obtained may result from the fact that the data is unstable or inadequately sampled. In Principal Components Analysis (PCA) the Kaiser-Meyer-Olkin (KMO) measure gives an indication of sampling adequacy. As indicated by Tabachnick and Fidell (1989) KMO values of at least 0.60 are required for a good PCA. However, the closer the value to 1.0 the better, indicating that partial correlations are small. In the present study the KMO was 0.57, not quite reaching the minimum of 0.60. This indicates that the Principal Components Analysis should be interpreted with caution. In other words, components will give an indication of what is happening in the data, but this should not be interpreted too literally.

According to Anastasi (1989) it is desirable that reliability coefficients be in the 0.80's or 0.90's. In the present study only the first factor obtained a reliability coefficient in this range. The other four factors obtained reliabilities in the 0.50 to 0.60 range. These could be described at best as adequate. However, considering the instability of the sample, the reliabilities are as expected.

Another aim of the study was to identify any consistency in the components emerging across the different samples including those from previous studies. There is evidence of consistency across the five studies. Examination of Table 3 revealed considerable overlap between the components identified for each sample. This indicates that

individuals are tending to use the same types of strategies to cope with the pressures they encounter at work even though the type of work they do is completely different. That is, individuals' occupations range from white collar jobs such as nurses, teachers, church ministers and mail order supervisors, to blue collar jobs such as cleaners. Most of the populations, however, have direct action as the main coping strategy, accounting for the majority of variance.

Dewe and Guest (1989) predicted that further studies would produce several of the components found in the four studies they had conducted. The present results support this prediction. The five components emerging in this study fit into four of the previously defined categories, these being, direct action, emotional release, distraction, and passive rationalization. Thus, it can be seen that direct action, emotional release, distraction and passive rationalization all appear in at least four of the studies, supporting the hypothesis proposed by Dewe and Guest (1989) that these components, as a group, provide a far more thorough descriptive classification of coping methods than they do individually.

The above authors felt it plausible to hypothesize that blue collar workers will have less control and less scope to use problem-focused methods of coping with stress. The present study however failed to confirm this. It was found that direct action which fits with Folkman and Lazarus' problem-focused coping was the largest component accounting for most of the variance. This suggests that most individuals used most of the forms of problem-focused coping but only some of the forms of emotion-focused coping.

THEORETICAL IMPLICATIONS

At a surface level, the results from the present study can be seen to fit into the theoretical classification of problem-focused and emotion-focused coping proposed by Folkman and Lazarus (1980). The first component can be seen to consist of problem-focused coping strategies while the remaining four components are more emotion-focused in content. This result is comparable with those of Dewe and Guest (1990). The components found in their study could also be seen to fit into this problem-focused and

emotion-focused coping distinction. Their component "utilization of home resources" does not appear to fit into this categorization but as they point out, this component does not fit well into any of the alternative classifications either.

In contrast to previous research it can be seen that the emotion-focused components in the present study and the study by Dewe and Guest (1990) have a strong action element. Individuals are using emotion-focused coping strategies that require action. That is, individuals are seeking to cope with their stress by active means other than dealing directly with the problem. Hence, the action is not directed at the source of the stress.

The finding above questions the assertion of Latack's (1986) that coping, other than direct action, can be described as cognitive reappraisal. As with Dewe and Guest's findings all the components were found to have some action element. It appears that coping at work even though it may not focus directly on solving the problem can sensibly be described in terms other than cognitive reappraisal. While it is not dealing directly with the problem, it is adopting an active stance rather than a passive (cognitive) one.

The value of the distinction between direct action and palliatives is highlighted by the results in the present study. Folkman and Lazarus (1980) proposed this distinction and suggest that it is more valid than their previously suggested distinction of problem-focused and emotion-focused coping. In the present study and all but one of the studies by Dewe and Guest (1990) a clear and important component emerged, accounting for the largest amount of variance, which was concerned with direct action.

The studies, however, indicate that there are a range of additional components. These include; emotional release, distraction, passive rationalization, social support, preparation, and other miscellaneous components. This range of components reinforces the view Fleishman (1984) put forward that suggests that the emotion-focused/problem-focused dichotomy provides only a surface distinction. It appears that beneath the surface the factor structure is more complex, particularly with respect to the variety of palliative or emotion-focused coping methods, both active and passive. This has now been

acknowledged by Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen (1986) and Dewe and Guest (1990).

One may be better able to understand the the role of these diverse palliative coping methods when they are considered within the framework of primary and secondary appraisal (Lazarus, 1966; Folkman, 1982, 1984; Dewe and Guest, 1990). Following an individuals' decision that a situation demands action (primary appraisal), he or she must then decide what can be done (secondary appraisal). Differences in the way people cope are due to secondary appraisal, the coping strategies people choose to adopt. These may be influenced by past coping that individuals have found effective or how hopeful they feel about being able to change or influence the outcome. This is effected by their job level.

Secondary appraisal and the amount of control an individual feels they have over a situation plays a significant part in the coping strategy chosen. If the situation is seen as controllable, then problem-focused coping is more likely to be used. However, if the individual perceives the situation as offering little or no control, then the emphasis is more likely to be on reducing the emotional discomfort. In the present study, individuals appear to have little control over their job and would, therefore, be expected to use emotion-focused coping strategies, whereas in the studies by Dewe and Guest (1990) the individuals were seen to have more control and therefore, be more likely to use problem-focused coping strategies.

Dewe and Guest (1990) and Dewe (1987) suggest that the issue of control assumes more importance when the nature of the sample is considered. The samples used in their studies consisted of white collar supervisory and professional workers who would be expected to have a high level of control over the important features of their work. Hence, their finding that problem-focused coping accounted for the largest amount of variance was not surprising. The present study, however, consisted of blue collar workers who are expected to have little control over the important features of their work. Surprisingly, workers were still found to be using problem-focused coping significantly more than emotion-focused coping. Explanations come in the form of

questionnaire limitations and the fact that individuals may not have been subject to high levels of stress. These are discussed in more detail later.

COPING AND SEX DIFFERENCES

The prediction that no significant difference would be found between the coping strategies employed by males and females was supported for the most part. Of the five components from the Principal Components Analysis, a significant difference was found in positive distraction, only. Males used significantly more positive distraction to cope than did females. This suggests that the males in the sample tried to see the humorous aspects of the situation, thought of the good things in the future, and made an effort to distract themselves with fun or pleasurable activities more than the females in this sample. The positive distraction component is, however, the fourth component in the Principal Component Analysis and only accounts for five percent of the variance. This is a small portion of the explained variance, explaining only a fraction of subjects' overall coping behaviour or strategies. It is, therefore, reasonable to conclude that males' overall coping is not significantly different from that of females.

The above result, tends to support the conclusions drawn by both Folkman and Lazarus (1980) and McDonald and Koribik (1991). Folkman and Lazarus suggest that sex differences in coping may be attributable to women being in lower level jobs to men which limit the types of coping strategies that can be used. This seems consistent with the present results. Individuals are in blue collar positions with little autonomy and have a limited range of problem-focused techniques available to them. As McDonald and Koribik (1991) suggest, previous studies have failed to take into account the fact that men and women are often in different level jobs when they are compared, and it is this discrepancy that may produce the sex differences that have been found in the past.

The present study has the advantage of comparing males and females in the same level job. From the results we can surmise that no sex differences exist. This supports the study by McDonald and Koribik (1991) who found no sex differences in a similar study where male and female managers were compared.

The effectiveness of coping, however, was not addressed in the present study. According to Tung (1980; cited in McDonald and Korabik, 1991) women managers may be better able to cope with job stress than men. Would this be the same for blue collar populations? Further research needs to be conducted before any conclusions can be drawn in this subject.

The prediction that men will use alcohol significantly more than women as a method of coping with stress was not supported. Males did have a higher reported usage of alcohol than females but this difference was not significant. More men than women, however, reported going and having a few beers or other drinks to cope with stress (48% versus 37%). This is consistent with the findings from the study by Timmer, Veroff, and Colten (1985) in which more men than women reported using alcohol to relieve tension (29% versus 16%). It must be noted, however, that in the present study the majority of individuals who reported having a few drinks to relieve tension, reported doing so "sometimes".

Social desirability could be a reason why no one reported high usage of alcohol to cope with the pressures at work. Since it is not socially acceptable to drink too much, and may in fact be detrimental to their work, individuals would be reluctant to report using alcohol frequently.

Rudinger (1988) identified job stress as one of the main causes of men drinking, but found this was not so for women. Job stress was not measured in this study. Therefore, no conclusions can be drawn about whether people actually drank more when they were under greater pressures at work. Moreover, it cannot be ruled out that home pressures play a part. These are areas in which more research would be beneficial.

The prediction that women use smoking significantly more than men as a method of coping with stress was not supported. The present study, in fact, found that more men than women reported using smoking to cope with the pressures at work. The difference was, however, not significant.

Several explanations can be put forward that may account for this. Firstly, the levels of smoking reported were not high. Only 15% of men and 17% of women reported smoking more than sometimes in response to stress. Part of the reason for this may be due to the nature of the job. Individuals are limited to smoking only in their break times. Many individuals, however, clean in large buildings with heavy security. This limits their access to the building. Since many of these buildings are non-smoking areas, individuals may find it difficult to have a cigarette during work time.

Secondly, evidence shows that women excrete nicotine more rapidly than men and, therefore, suffer greater decreases in their nicotine levels during stress, requiring additional administration to maintain their desired mood. The actual level of stress is unknown in the present study since it was not directly measured. It is possible, however, that significant differences may have been found if cigarette consumption was measured when individuals were experiencing a high level of stress.

A third explanation for the failure to find a significant result could be that the actual number of cigarettes smoked per day was not measured. Perhaps it would have been more appropriate to ask subjects to record how many cigarettes they smoke, on average. In addition to this they could be asked to think of a specific stressful work encounter and then recall how many cigarettes they smoked on that particular day. This would give an idea of the increase in cigarette smoking in response to a stressful situation.

A link between stress level and the number of cigarettes smoked was not established in the present study. This needs to be investigated further. As Rudinger (1988) points out, smokers can often gauge the stressfulness of a situation by their cigarette consumption. Our failure to find sex differences in smoking may be due to the fact that subjects were not under stress. Indeed, several subjects commented on the fact that they felt under no pressure.

The prediction that women will use tea/coffee significantly more than men as a method of coping was not supported. In fact, more men than women reported using tea/coffee to cope with the pressures of work, but not significantly so. It is unknown

why this occurred. A possible explanation could be that women have a higher average intake of tea/coffee and did not see their consumption as related to stressful episodes. Caffeine intake would need to be measured more accurately than was done in the present study to be able to draw stronger conclusions.

A possible explanation of the low reported levels of caffeine intake could be a function of the job itself. In many of the white collar populations studied previously by Dewe and Guest (1989) individuals were more able to stop for a cup of coffee whenever they felt like it. In many office situations, workers are even able to work with a tea/coffee on their desk. This blue collar population had limited access to tea/coffee, intake was limited to breaks, and due to the nature of their part time work, many individuals did not work long enough to warrant a break. Hence, the limited access to tea/coffee may be a reason for the low levels of usage as a coping resource. This may have affected the women more than the men in the sample. Women may have been forced to resort to other coping strategies.

The results failed to support the prediction that women will eat more in response to stress than men. More men reported using "eat more" than did women, but not significantly so. In fact 20% of men reported using "eat more" as compared to 18% of women.

Several explanations can be put forward to explain this unexpected result. Rudinger (1988) suggests that women eating more can be a barometer of the level of long-term stress that they are under. In this case, since they have not reported eating more, it could indicate that they are not under any long-term stress. However, Rudinger also suggests that some women, when under great levels of long-term stress, eat less. From the present study we are unable to distinguish between these two effects.

The above result could be affected by social desirability. The women may not be inclined to report their over-eating due to socially negative connotations associated with the practice.

Finally, some women may not realise that they "eat more" in response to stress. Especially if they are under long term stress they may not realise that they are continually eating more than they normally would. Moreover, they may attribute their increased food intake to factors other than stress.

The prediction that women will use prayer significantly more than males as a means of coping with the pressures at work was supported. This result is consistent with the findings of the study by Neighbours, Jackson, Bowman, and Gurin (1983) which found that more females than males see prayer as the most helpful coping response.

This finding also supports the idea put forward by Rothbaum, Weisz and Snyder (1982) that when a situation is viewed as uncontrollable, religion may be used as a means of gaining "secondary control", understanding, and thereby acceptance of the event. Since this population has little autonomy at work this seems a plausible explanation.

The fact that the present study used a self report questionnaire to gather information must be taken into account when looking at the results. There are problems associated with just asking people how they are coping (Cohen, 1987). People may interpret the question differently, not know how they cope or simply forget how they coped. Also, according to Latack (1986), respondents may give socially desirable rather than honest responses about coping behaviours to enhance self image. Nevertheless, self report can yield important information and studies have shown significant relationships between self reported coping and adaptational outcomes (Lazarus and Folkman, 1984). It has been suggested that self report can be as predictive of outcomes as are other assessment methods (Shrauger and Osberg, 1981). The data from the present study may need to be validated using data obtained from spouses, relatives, close friends, or workmates. These would provide sources of independent coping assessments.

EMOTION-FOCUSED VERSUS PROBLEM-FOCUSED COPING

The prediction that emotion-focused coping will be used significantly more than problem-focused coping was not supported. In fact the opposite was found, significantly more problem-focused than emotion-focused coping being reported.

In a study of white collar workers, McDonald and Koribik (1991) found that managers used problem-focused coping to deal with stress in the workplace. It has been found, however, that when individuals feel little control over their situation they resort to emotion-focused coping. Since the population in question has little autonomy and hence are likely to feel little control over their work, it was expected that they would use emotion-focused coping. This did not seem to be the case.

Several explanations can be put forward that may account for this. Firstly, significantly more problem-focused than emotion-focused coping may have been reported due to the fact that certain problem-solving techniques may have been consistently checked by most individuals. It must be conceded that a limited range of problem-solving techniques are available to blue collar workers. On the other hand, the emotion-focused coping strategies that individuals checked were more varied due to wide individual differences. Since a more varied range of emotion-focused coping strategies was used, no one emotion-focused strategy was checked consistently by every individual while the problem-solving strategies available were checked more frequently by respondents.

Another explanation is that since the study is self report, it is quite possible that their perceptions of how they cope are actually different to how they do, in fact, cope. Individuals may see themselves as problem-focused copers, or might like to think they use problem-focused coping when in actual fact they do not. This socially desirable type response may confound the results and be a plausible explanation.

Another possible explanation for this finding may be other limitations of the questionnaire. The questionnaire asks individuals to check how often they use each of the coping strategies. This, in effect, gives an indication of how often individuals

remember using each of the strategies in response to a stressful situation. It does not indicate whether an individual used this strategy effectively or not. No outcome measure of the effectiveness of the coping strategy is available. Moreover, people are more likely to remember and report strategies that are socially acceptable and effective than other less effective, less socially desirable strategies.

The prediction that emotion-focused coping strategies will be used significantly more by ethnic minorities than problem-focused coping was not supported. In fact, in all three ethnic groups, Pakeha, Moari, and Other, problem-focused coping was used significantly more than emotion-focused coping. This is contrary to the findings of previous studies by Billings and Moos (1980), Slavin, Rainer, McCreary, and Gowda (1991), Neighbours, Jackson, Bowman, and Gurin (1983) and Veroff, Douvan, and Kulka (1981) who found that minority groups tend to use emotion-focused coping strategies.

In the present study there were significant differences between the level of emotion-focused and problem-focused coping but these were in the opposite direction to expectations. The present study is interpretable, however, in the light of a study by Anderson (1976, 1977). Anderson showed that at higher levels of stress, individuals abandon problem-focused coping and turn to emotion-focused coping strategies. Since the studies mentioned above are all based on the premise that blacks have higher levels of stress, then it is reasonable to assume that they will use emotion-focused coping as they did, indeed, find. However, in the present study, individuals did not appear to be highly stressed.

ETHNIC DIFFERENCES

The prediction that one ethnic group will use different coping strategies to individuals belonging to other ethnic groups was not supported. Using an analysis of variance a significant difference was found in the passive rationalization component. When a Scheffe test was used to investigate where this difference lay, no difference was

found. This can be explained by the fact that the Scheffe test is more stringent than the analysis of variance and according to Chase (1984), linked with higher rates of rejection.

The finding concerning ethnic differences in the present study does not support past research. Slavin, Rainer, McCreary and Gowda (1991) found that the coping strategies used more often than not by both male and female members of oppressed ethnic and class groups are emotion-focused. Studies by Veroff, Douvan and Kulka (1981) and Neighbours, Jackson, Bowman and Gurin (1983) also support this idea that blacks are seen to use emotion-focused coping strategies. These studies, however, were conducted in America, on black populations. Individuals participating came from very large cities where the standard of living for the poor was much lower than for the subjects in this study. The prevalence of poverty, ill health, and low education is much higher in the United States than in New Zealand. The overseas studies mentioned also took a global view of stress whereas the present study only looked at stress and coping in the workplace.

The results do support the study by Stroman and Seltzer (1991) which found no substantive racial differences in job coping behaviours. Their results indicated that blacks and whites utilize a wide variety of strategies and that they use similar strategies to cope with somewhat different occupational stressors. They suggest that the fact that no substantive racial differences in job coping behaviours were found was particularly interesting when compared to previous research which suggests that one's situational context influences one's choice of coping. In the present case the number and type of problem-focused strategies available to individuals is limited due to the routine nature of their work so there is likely to be little variability in coping strategies across groups, hence the present finding.

The prediction that individuals from an ethnic minority will be more likely to use prayer as a means of coping than individuals who were not was not supported. The results indicate that both "Maori" and "Other" report using prayer more than "Pakeha" as a means of coping but not significantly so. Neighbours, Jackson, Bowman, and Gurin (1983) found that use of prayer was an important coping resource for blacks in America.

This use of prayer indicated how important religion and the church was in these communities. Since the church is also important to Pacific Islanders, it was thought that prayer would be an important part of their coping repertoires. However, this was not found to be so. This was partly due to the fact that the sites the researcher had access to did not contain large numbers of Pacific Islanders. Those sites visited that did have Pacific Islanders produced a high proportion of non-response due to their limited English reading ability. The present sample was unbalanced with significantly more Pakehas than other groups and significantly more females than males in the sample. This reflects the mix of the actual cleaning population but makes it less likely that significant differences will be obtained.

SUMMARY AND CONCLUSIONS

Dewe and Guest (1990) argued for and presented an inductive approach to the development of a valid classification of the major methods of coping with work-related stress built on a carefully articulated methodology. The present study replicated this using a blue collar population.

Comparisons of the components emerging from Dewe and Guest's four studies and the present study highlight some consistencies across the populations, despite their differing work contexts. It was possible to identify four main forms of coping with work related stress. These are direct action, emotional release, distraction, and passive rationalization. In populations other than the present one, there was also at least one unique category. It now seems plausible to hypothesize that further studies using this method should confirm the consistent identification of these components. This would further reinforce the hitherto insufficiently recognized importance of a variety of palliative methods of coping.

There is certainly a need to test this approach on other populations especially on further blue-collar workers. Factory workers or those working on a production line would be seen to have even more limited autonomy and higher levels of stress than the cleaners

in the present study. More consideration will also need to be given to the influence of individual differences in, for example, age and family circumstances.

Further research on a longitudinal basis, combining this methodology with critical incidents and with a clearer indication of the frequency with which different techniques are used, is needed. It is also important to explore whether individuals use specific combinations of techniques. Finally, the effectiveness of the different underlying methods must be assessed.

When investigating overall coping strategies, no sex differences were found in the present study. The implication here is that males do not use different coping strategies to females when confronted with stress. However, previous research into specific coping strategies such as consumption of alcohol, cigarettes, food, tea/coffee, and use of prayer indicate sex differences. The lack of confirmation here may be attributable to limitations in the questionnaire or sampling procedures. Future research needs to be undertaken to measure the actual intake of each of these strategies. A measure of the level of stress also needs to be taken since these strategies are more likely to show a greater difference when the level of stress is higher.

Problem-focused coping was found to be the most prevalent form of coping in the present study. This finding was contrary to previous findings but can be attributed to the fact that since individuals have limited problem-solving techniques available most people use most of them all of the time, whereas, emotion-focused coping strategies are more varied due to individual differences. It must be asked, however, whether these blue collar workers, even though they are using problem-solving techniques, are coping effectively. Further research is needed into the effectiveness of these strategies before conclusions can be drawn.

A high incidence of active coping strategies was found to be present in this study. These were found not only in the problem-focused strategies but also in the emotion-focused strategies. This indicates that coping at work other than direct action can sensibly be

described in terms other than cognitive reappraisal. Further investigation into the nature of this is required.

The different ethnic groups in the present study were found to use similar sorts of coping. This supports the study by Stroman and Seltzer (1991). It remains to be investigated, however, whether the different ethnic groups are facing similar stresses or whether they are faced with a different range that they must cope with.

In conclusion, the methodological approach used in the present study imposes limitations on the nature of the conclusions that can be derived from the data. This study, as does a large amount of coping research, employs a cross sectional design, and relies solely on the use of self report indices. Given these methodological constraints, further research is needed before firm conclusions can be drawn about the coping issues explored here.

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APPENDIX 1**HANDLING WORK PRESSURES
INFORMATION SHEET**

I am Kristin Lyon and I am working on a research project with Massey University and Crothalls.

What the study is about?

The research project that I am working on looks at how people deal with pressures at work.

Eligibility

You are eligible to take part in the study if you are a cleaner employed at Crothalls either full-time or part-time.

What you will be asked to do

You will be asked to complete a questionnaire. This will take about 15 minutes of your time. You will be asked to indicate how often you do certain things to deal with pressures at work. You will also be asked to fill in some general information about yourself.

Your rights as a participant**All participants:**

- * Have the right to refuse to answer any question, or withdraw from the study at any time
- * Provide information on the understanding that it is completely in confidence to the researchers, to be used only for the purposes of the research. It will not be possible to identify individuals in any reports of the results
- * Have the right to talk to the researcher at any time during the research to discuss aspects of the study
- * Provide information on the understanding that your boss at Crothalls will have no access to your individual questionnaires
- * Will receive information about the results of the study on it's completion

APPENDIX 2

HANDLING WORK PRESSURES

Consent Form

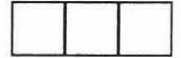
If you are willing to participate in this study please complete this form and return it with the completed questionnaire to the researcher.

I have been informed about what the study is and understand the details of the study. I understand that I may ask questions at any time and decline to answer any particular questions in the questionnaire. I also understand that I am free to withdraw from the study at any time. I agree to provide researchers with information on the understanding that it is completely confidential, and I will not be identified in any reports from the study.

Signed: _____

Name: _____

Date: _____



HANDLING WORK PRESSURES

This questionnaire has been developed to look at how workers deal with situations in the workplace.

Please consider each statement in the list below and indicate how frequently you use such actions to deal with the pressures at work by circling the appropriate number on the scale.

	Always	5	
	Regularly	4	
	Quite Often	3	
	Sometimes	2	
	Never	1	
Talk about the situation with someone at work	1 2 3 4 5		<input type="checkbox"/>
Forget work when finished for the day	1 2 3 4 5		<input type="checkbox"/>
Just avoid the problem	1 2 3 4 5		<input type="checkbox"/>
Get advice and suggestions from someone else at work	1 2 3 4 5		<input type="checkbox"/>
Try not to worry or think about it	1 2 3 4 5		<input type="checkbox"/>
Take some immediate action	1 2 3 4 5		<input type="checkbox"/>
Let people know exactly where you stand	1 2 3 4 5		<input type="checkbox"/>
Eat more	1 2 3 4 5		<input type="checkbox"/>
Just give up and accept what's happening	1 2 3 4 5		<input type="checkbox"/>
Go and have a few beers or other drinks	1 2 3 4 5		<input type="checkbox"/>
Lose temper for a moment	1 2 3 4 5		<input type="checkbox"/>
Cover up problems rather than deal with them	1 2 3 4 5		<input type="checkbox"/>
Make people aware you are doing your best	1 2 3 4 5		<input type="checkbox"/>
Take a break and come back to the problem later	1 2 3 4 5		<input type="checkbox"/>

	Always	5	
	Regularly	4	
	Quite Often	3	
	Sometimes	2	
	Never	1	
Simply drop what you are doing and take up something totally unrelated	1 2 3 4 5		<input type="checkbox"/>
Leave the problem and try to solve it later by talking it through at home	1 2 3 4 5		<input type="checkbox"/>
Spend more time daydreaming	1 2 3 4 5		<input type="checkbox"/>
Try to find out more about the situation (eg. seek out additional information)	1 2 3 4 5		<input type="checkbox"/>
Exercise more	1 2 3 4 5		<input type="checkbox"/>
Get mad with yourself and tell yourself you could have avoided the situation	1 2 3 4 5		<input type="checkbox"/>
Draw on support from your boss. Discuss the problem with him/her	1 2 3 4 5		<input type="checkbox"/>
Consider a range of plans for handling the situation - set priorities	1 2 3 4 5		<input type="checkbox"/>
Just become more involved in family life, helping with partner and children	1 2 3 4 5		<input type="checkbox"/>
Smoke more	1 2 3 4 5		<input type="checkbox"/>
Follow proper channels of procedure to "cover yourself"	1 2 3 4 5		<input type="checkbox"/>
Make an effort to distract yourself with some fun or pleasurable activity	1 2 3 4 5		<input type="checkbox"/>
Try to see the humorous aspects of the situation	1 2 3 4 5		<input type="checkbox"/>
Get support from the fact that not all problems can be solved at a national level	1 2 3 4 5		<input type="checkbox"/>

Always	5
Regularly	4
Quite Often	3
Sometimes	2
Never	1

Get rid of the tension by expressing some irritability and frustration to yourself - swearing, slamming things down, crumpling up pieces of paper etc.

1 2 3 4 5

Don't think clearly about the situation and don't keep your feelings under control

1 2 3 4 5

Try to get as much rest as possible so you will be fresh and alert at work

1 2 3 4 5

Whenever possible give your opinion about how things are done and the way things are going at work

1 2 3 4 5

10 Throw yourself into work and work longer and harder

1 2 3 4 5

Face the situation knowing that your family and partner gave you help and a sense of proportion

1 2 3 4 5

Try to prevent others from finding out about the pressures you are under

1 2 3 4 5

Think about it and be prepared for the worst

1 2 3 4 5

Think about the good things in the future

1 2 3 4 5

Leave work early and go home

1 2 3 4 5

Try to introduce some variety into your job

1 2 3 4 5

Reconsider how much energy you put into your work

1 2 3 4 5

Tackle routine work so that you can cool down and get your composure back

1 2 3 4 5

Take the day off

1 2 3 4 5

Always	5
Regularly	4
Quite Often	3
Sometimes	2
Never	1

Don't let the problem go until you have had a chance to deal with it	1 2 3 4 5	<input type="checkbox"/>
Take feelings out on workmates or whoever happens to be around	1 2 3 4 5	<input type="checkbox"/>
Express your irritation to other workmates just to let off steam	1 2 3 4 5	<input type="checkbox"/>
Think of your next lot of work and hope it will be better than your present work	1 2 3 4 5	<input type="checkbox"/>
Move on to other work activities that you know you can get satisfaction from	1 2 3 4 5	<input type="checkbox"/>
Talk things over with your partner when you get home at night	1 2 3 4 5	<input type="checkbox"/>
Try to reassure yourself that everything is going to work out all right	1 2 3 4 5	<input type="checkbox"/>
Ignore for a time the problem until you feel ready to handle it	1 2 3 4 5	<input type="checkbox"/>
Pray	1 2 3 4 5	<input type="checkbox"/>
Drink more tea or coffee	1 2 3 4 5	<input type="checkbox"/>

I would now like to collect some personal data about who you are. For each question circle the appropriate answer.

Are you MALE

FEMALE

How old are you? _____

Would you describe yourself as:

PAKEHA

MAORI

SAMOAN

TONGAN

OTHER (please specify) _____

Are you: SINGLE

MARRIED (or living as married)

SEPARATED

DIVORCED

WIDOWED

Do you consider yourself to be religious?

YES

No

Do you have any children living with you?

YES

NO

If so how many children? _____

How old are they?

How many hours per week do you work at Crothalls? _____

How long have you been employed by Crothalls? _____

Do you have other paid employment?

YES

NO

If so, how many hours?

Are you working while still doing secondary or tertiary studies?

YES

NO

APPENDIX 4

SUMMARY RESULTS OF THE STUDY INTO HANDLING WORK PRESSURES CONDUCTED WITH CLEANING STAFF AT [REDACTED]

The purpose of this feedback is to provide you with some background information and to give you the basic findings of the study. Conclusions at this stage are tentative.

This study set out to see how cleaning staff handled work pressures. Several questions were asked. These included:-

- * What coping strategies did cleaners use?
- * Do cleaners cope any differently than: Teachers? Managers? Church Ministers? Nurses?
- * Do males cope any differently than females?
- * Do Pakehas cope differently to Maoris? Pacific Islanders? Others?
- * Does religion play any part in coping?
- * Do cleaners use problem-focused or emotion-focused coping strategies?

Data was collected over a period of 8 weeks from early May 1993 to mid July 1993. The questionnaire was administered by the researcher in each of 6 regions with 153 cleaners taking part in the study.

The results indicated that the cleaners used 5 main coping strategies. These were direct action, expression of emotion and avoidance, attempts to tolerate or mitigate the effect, distraction by use of pleasurable activities, and emotional release. By comparing the findings in this study with the findings of other studies it can be seen that cleaners do not cope any differently than other workers such as teachers, nurses, managers, or church ministers.

Furthermore, the males did not handle pressure any differently than females. Both appear to use the same types of coping strategies to deal with the pressures at work. The results also indicated that there was no difference in the way that Pakehas, Maoris, Pacific Islanders, and Others coped. All the groups appeared to use the same types of coping strategies.

Religion did play a part in the way individuals coped with stress. It appeared that more women than men used prayer as a coping strategy and as a way of gaining some control over the situations they encounter at work.

Overall, the cleaners in the study used more problem-focused coping than emotion-focused coping. This means that individuals are more likely to take some direct action to deal with the problem than to ignore or avoid it.

In conclusion I wish to thank everyone that participated in the study. Without your help this research would not have been possible. I hope this study has raised your awareness about the way in which you and your workmates cope.

If anyone would like more information please contact me at Massey University extension 7163.

KRISTIN LYON