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Occupational stress, coping styles, and social resources

Wayne L. Hill
Edith Cowan University

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Occupational Stress, Coping Styles and Social Resources.

Wayne L. Hill

Student Number: [REDACTED]

Edith Cowan University

Bachelor of Arts (Psychology) with Honours

Supervisor: Dr Mark Groves

Submission Date: May 1995

Running head: COPING WITH OCCUPATIONAL STRESS

USE OF THESIS

The Use of Thesis statement is not included in this version of the thesis.

Abstract

Researchers in the stress and coping field have developed a variety of “stress and coping” models to explain the interaction between stressors, social resources, coping styles, and distress symptoms (Edwards & Baglioni, 1990). The present study examined three models to explain the relationship between the variables: direct effect, buffering effect and mediating effect. This study examined effective and non-effective coping styles at work: accommodation, change, avoidance, devaluation, and symptom management. Data were collected on 120 white collar workers’ state of mental exhaustion, somatic symptoms, role stressors, coping styles, and perceived social support. The utility of the three models was examined using multiple regression analysis. Support was found only for the direct effects model. Social support was not shown to have a buffering effect. Initial examination of the variables examined for coping styles suggested support for the buffering effect. However, the problem-focused coping style showed no significant relationship with distress symptoms, and both the emotion-focused and appraisal-focused coping styles positively correlated with reported distress. Data showed little support for the mediating effects model. Implications include: (a) the causal process of models requires consideration of the bi-directional relationship among variables; (b) social factors may be more than levels of support, but potentially substantial stressors.

Declaration

I certify that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any institution of higher education; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

Signature ..

Date 7th December 1995

**OCCUPATIONAL STRESS, COPING STYLES, AND
SOCIAL RESOURCES**

by

Wayne L. Hill

A Thesis Submitted in Partial Fulfilment of the

Requirements for the Award of

Bachelor of Arts (Psychology) Honours at the

School of Health and Human Services, Edith Cowan University

Joondalup, Western Australia

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Occupational stress, coping styles, and social resources

The work place has been identified as a major source of stress in the lives of many people (Karasek, Gardell & Lindell, 1987). Prior research has identified that the ways people cope with work stress affect their psychological and physical well-being (Burke, 1993; Eulberg, Weekley & Bhagat, 1988; Folkman & Lazarus, 1980; Karasek, Gardell & Lindell, 1987).

Excessively stressful situations in the workplace have many costs to both individuals and companies. Employees may exhibit a range of somatic symptoms of distress, and engage in behaviour that may be detrimental to their well-being (e.g., excessive eating or alcohol intake). Furthermore, there is substantial support for the relationship between both physical and mental illness and work stress (Cooper, 1986; Karasek et al., 1987).

Corporations have an economic interest in understanding the factors contributing to workers' dissatisfaction. Costs to the organisation include lower staff moral, greater absenteeism, higher job turnover, and reduced productivity (Kemery, Mossholder & Bedeial, 1978).

Occupational stress can be attributed to a wide range of job demands. Types of demands identified include role ambiguity, role conflict, role overload, variability and complexity of tasks. Sources of demand originate from roles played by the employee, significant others, and organisational

procedures (Shiron, 1982; Callan, 1993). Demands can be ongoing or episodic. Successful coping with work stressors may include the ability to utilise available social resources such as co-workers, family, and friends (House & Wells, 1978; LaRocco & Jones, 1978).

The present study will examine coping as a style. This makes the assumption that people have preferred methods of dealing with problems they encounter. This is supported by Ender, Kantor and Parker (1993) who found a relatively strong relationship between specific coping styles and situationally specific responses.

The stress process may include factors such as the stressors, coping, social resources, and symptoms of distress. However, there is substantial disagreement as to the terms and nature of stress. A clear understanding of the various factors involved with the stress process may assist in the understanding and reduction of the costs that occur due to stress in the workplace.

What is Stress?

There has been much research investigating the concept of stress in our lives. However, there is a lack of a clear definition of 'stress' (Berger, 1991; Cox, 1985; Flemming, Baum & Singer, 1984). Part of the confusion as to the meaning of stress lies in the variety of ways it is used. The term has been used

to describe a stimulus, an interaction, a response, or a combination of these factors (Berger, 1991). For the purpose of this investigation the following definition of stress will be used: Stress is "... a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (Lazarus & Folkman, 1984, p. 19).

Stress is difficult to measure, partly due to the interrelationship between stressors and the methods of coping with the stressful situations (Lazarus, DeLongis, Folkman & Gruen, 1985). For example, the denial of feelings in problematic situations is a coping mechanism used by some people. Unfortunately, this method of coping is not always successful in alleviating the various physiological responses commonly associated with stress (e.g., fatigue, gastrointestinal problems, headaches, muscular skeletal aches, disorientation). Nor is it effective in reducing problematic behaviours (e.g., aggressive actions, excessive alcohol intake).

A consideration as to what constitutes stress can be understood by examining what is important to people. Distress can occur due to non-attainment of various needs and wants. Maslow's (1968) 'hierarchy of needs' identified a large number of items that are important to a person's well-being. Items identified were physiological needs (e.g., food, water, shelter) safety

needs, (e.g., interacting in a safe environment), needs related to belonging, friendship and love, and esteem needs such as achievement and recognition. Distress may occur when these needs are not being adequately satisfied.

Pearlin and Schooler (1978) found that many of the difficult problems that people have to deal with are "...not unusual problems impinging on exceptional people in rare situations, but are persistent hardships experienced by those engaged in mainstream activities within major institutions" (p. 3). Institutions are established environmental settings that contain familiar people. The majority of stressors seem to be encountered in daily situations faced at home and work.

Work stress

Work can be an important part of a person's identity, self worth, and status. Furthermore, a number of our social contacts and friendships are developed within the work environment. Without work, people can undergo a range of economic and psychological hardships (Brief & Atieh, 1987). Therefore, considerable time and energy is spent developing a range of skills that enables individuals to participate in the workforce. However, once in a position of employment there are often a number of situational factors that may cause distress.

An understanding of work stress may be gained from an examination of the global needs people fulfil from work. Locke (1976) suggested that the most important aspects of work satisfaction are: (a) mentally challenging work which the individual can cope with successfully, (b) personal interest in the work itself, (c) rewards for performance which are consistent with the individual's aspirations (e.g., social recognition, praise, monetary rewards), (d) working conditions which allow the job to be completed satisfactorily and which are not physically demanding, (e) high self esteem, and (f) basic values that are not violated by the above. People may vary in their requirements of these aspects of work satisfaction, however, they will experience distress when their work satisfaction criteria are not being adequately met.

Pearlin and Schooler (1978) identified the economic factor or “standard of living brinkmanship [sic]” as a substantial contributor to life-strain (p. 19). There are several reasons why the lack of suitable financial rewards becomes a stressor. Money serves as a symbol of achievement, a source of recognition, and as a means of obtaining other things that are valued (e.g., leisure, possessions). To some it is a status symbol, to others a means of security (Brief & Atieh, 1987). The rewards of work have a large degree of impact on the quality of life, and with the formation of people’s identity.

There are a number of additional factors that contribute to stress in the work environment. Cooper (1986) noted five categories of stress at work: (a) aspects intrinsic to the job (e.g., time pressures, work load, poor physical working conditions), (b) role in the organisation (e.g., role conflict, role overload, image of occupational role), (c) career development (e.g., underpromotion, overpromotion, lack of job security), (d) relationships at work (e.g., poor relationship with supervisors, colleagues or subordinates), and (e) the organisational structure and climate (e.g., little participation in decision-making, office politics).

There is a vast array of potential causes of distress within the work place that includes both the non-fulfilment of needs, and situational factors that elicit tension. Some work-related stressors such as the impact of low wages, and the

fear of the loss of employment seem to have had limited examination. Brief and Atich (1987) noted that prior research seems to have largely concentrated on role stressors. There are a number of useful insights to be gained by examining role stressors.

Role stress

Role stressors have consistently predicted both mental and physical symptoms of distress (Barling & MacIntyre, 1993; Kemery et al., 1987; Osipow & Spokane, 1984). Researchers have found role stressors to impact on a person's satisfaction with work, general life satisfaction, self esteem, mood, self-reported fatigue, tension, and anxiety (Beehr, Walsh, & Taber, 1976; Boyd & Pasley, 1989). There are three main dimensions to role stress: ambiguity, conflict, and overload (Barling & MacIntyre, 1993).

Role ambiguity has been defined as unclear articulation of job requirements in terms of behaviours or performance levels or both. It is characterised by vagueness and a lack of agreement regarding role expectations (Murphy & Gables, 1988). Rizzo, House and Lirtzman (1970) have suggested that ambiguity should increase people's dissatisfaction with their role as they will "... experience anxiety, distort reality, and thus perform less effectively" (p. 151).

Role conflict occurs when an employee's task has two or more incompatible expectations. Murphy and Gable (1988) explained four subcategories within the operational definition of role conflict: (a) intra-sender conflict: inconsistent expectations made by a 'role sender' (e.g., work colleagues, supervisors) given the available resources (i.e., time, money, participant's competence); (b) inter-sender conflict: inconsistent expectations or demands made by one or more role senders; (c) inter-role conflict: occurs when two or more roles are simultaneously held by a person such that compliance with expectations from one role creates conflict in the other; and (d) person-role conflict: internal standards or values and defined role expectations are incompatible.

Role overload can be seen as having tasks to undertake that are either too difficult or too great in number. Role overload is caused by organisations making demands that are beyond what the employee can handle in a given time (Bhalla, Jones & Flynn, 1991; Kirmeyer & Dougherty, 1988).

The distress created by role stressors interact with the individual's appraisal of the situation and the person's ability to take appropriate actions.

Appraisal

A key facet in the understanding of stress is the process of appraisal. Appraisal is the process by which a person evaluates the particular encounter with the environment as to its relevance to one's well-being, and if so, in what ways (Cox 1987; Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986). Lazarus (1991) described the appraisal process as the mechanism that brings together the elements of any stressful encounter -- the person and environment.

Researchers have discussed the concepts of primary appraisal and secondary appraisal to clarify the process (Dewe 1992; Lazarus, 1991; Rosenbaum, 1993). Primary appraisal refers to what is at issue in any encounter. Stressful encounters are evaluated in terms of harm or loss, threaten or challenge. Secondary appraisal is the evaluation of coping strategies and resources. It is concerned with what a person thinks and does within the encounter. Both primary and secondary processes are interdependent and will influence one another through the stressful event (Dew 1991; Dewe, Cox & Ferguson, 1993). Appraisal can then be seen as part of the evaluation of the stress process. It is the link between the stressor and the method of dealing with the problem situation.

Coping

There is a substantial body of literature that examines stress and appraisal in the workforce (e.g., *Work and Stress*, *Journal of Organisational Behavior*). Past coping researchers have mainly examined unusual populations (i.e., pathological samples, or people with exceptionally good adjustment), or coping with unusual or special events (e.g., tornadoes, parachute jumps) (Billings & Moos, 1981; Folkman & Lazarus, 1980). Little attention has been given to the ways people cope with day-to-day work stressors (Latack, 1986; Newton & Keenan, 1985; Schwartz & Stone, 1993). This is despite a number of researchers identifying work factors as contributing particularly strongly to psychological strain and physical illness (Cooper, 1986; Folkman, 1982; Karasek et al., 1987).

Coping can be viewed as a behavioural response to a particular situation or a general method for dealing with problems. Lazarus's (1966) 'cognitive phenomenological theory' describes coping as a transaction with the environment. This theory suggests that coping is a behaviour response specific to the problem faced. The person-environment interaction determines the coping intervention (Latack & Havlovic, 1992). However, much of the literature has discussed coping in terms of traits or styles (Newton, 1989; Parker & Endler, 1992; Rees & Cooper, 1992). Defining coping as a style

suggests a pattern of coping that a person exhibits over a longer term. The coping patterns might exist relatively independently of the problem faced, and the environment. They would enable people to respond to situations without comprehensively appraising situational characteristics. Coping is defined as "... cognitive and behavioural efforts used to manage specific internal or external demands that are appraised as taxing or exceeding the resources of the individual" (Lazarus & Folkman, 1984, p. 141). Coping behaviours are either active or passive attempts to respond to situations or threats with the aim of removing the threat or reducing the discomfort (Dewe & Guest, 1990; Latack & Havlovic, 1992). Researchers have made a major distinction between the focus of the coping intervention -- problem-focused versus emotion-focused (Lazarus & Folkman, 1984).

Problem-focused coping strategies are the group of responses that deal with altering the situation of the troubled person-environment relationship. The responses are aimed at defining the problem, generating alternative solutions, weighing alternatives (i.e., determining costs and benefits), choosing among alternatives and acting (Folkman, 1984; Havlovic & Keenan, 1991). Problem-focused coping strategies are direct attempts to alter or change the situation.

Emotion-focused coping strategies aim to regulate the emotional distress. They are the group of cognitive strategies used to reappraise the situational discomfort, and include avoidance, minimisation, distancing, selective attention, positive comparisons, selecting positive values from negative events, and symptom reduction (e.g., improving well-being by managing the reactions to distress) (Lazarus & Folkman, 1987).

Researchers have proposed a third category, that of appraisal-focused coping (Billings & Moos, 1982; Latack, 1986). Appraisal-focused coping consists of "... modifying the meaning or cognition of the situation" (Latack & Havlovic, 1992, p. 492). This strategy seems to be distinct from the other two coping strategies. Examples of appraisal-focused coping include devaluation (e.g., reducing the importance associated with the discrepancy), and accommodation (i.e., attempts to bring the situation in line with desires by adjusting desires to meet the situation).

Other considerations when examining coping are the frequency, and quantity of occupational stressors faced. When a number of situations become unbearably stressful, or a person has had long periods of exposure to particular stressors they may alter their coping approach. A person may try to deal with the stressors in a more excessive manner that may seem inappropriate to the situation (e.g., use of the emotion-focused strategy of

denial). Change in coping behaviours due to such considerations has had limited investigation (Carver, Scheier & Weintraub, 1989; Dewe et al., 1993). This is partly due to the requirement of viewing coping as a dynamic interchange between the person and the environment rather than a static state. Problems also exist in the practical aspect of attaining suitable data (e.g., ethical considerations).

Coping research in organisations may be in its infancy with many theoretical and practical research problems to be faced. Aldwin and Revenson (1987) have raised the question as to whether coping helps. They found that prior research questioned the effectiveness of coping strategies. However, organisational scientists may also ask what are the alternative means of dealing with unforeseen distress other than implementing coping strategies. Research on stress may be considered useful if it either identifies problems, or at least provides a direction for possible solutions. An examination of coping mechanisms offers a means of identifying and acting on stressful organisational situations.

The implementation of a coping response will also depend on the expected behaviours within the particular environment, and the utilisation of possible coping resources. Utilisation of the resources will depend on the

availability and acceptability of their use. An example of such a resource is that of social support.

Social support

Social resources are relationships with other persons "...which are characterised by relatively frequent interactions, strong positive feelings, and especially perceived ability and willingness to lend emotional and/or [sic] instrumental assistance in times of need" (House & Wells, 1978, p. 9). Support at work is available from a number of different sources: supervisors, other work colleagues, spouse or partner, friends, and relations.

Work relationships can also be sources of stress (Barone, Caddy, Katell, Roselione & Hamilton, 1988; Edwards & Cooper, 1988). Often the organisational work environment requires a person to interact with a wide range of people. The interaction would not always be by choice, nor with people who have similar value and belief systems.

Supervisors may make decisions that are overly focused on achievement with little thought for the well-being of staff. This may be due to the developed characteristics of the work environment. It could be seen as a place where many people are aiming to achieve a range of self-serving goals, without losing existing achievements (i.e., power, status, money, identity).

This is vastly different from the original purpose of labour, that of adapting the surroundings to make for an easier life (e.g., grow crops to eliminate the search for food).

The relationship between the staff member and the supervisor may be particularly pertinent to the well-being of the staff member (Kirmeyer & Dougherty, 1988). The supervisor has the greatest control over the wants of the subordinate (i.e., salary) and the demands placed on the subordinate (i.e., work load, type of tasks expected). The supervisor also has the ability to make major changes to the subordinate's life (e.g., employment dismissal). Supervisors also vary greatly in their ability to work with subordinates due to differing levels of interpersonal skills, competence and belief structures.

Support from colleagues can reduce levels of occupational stress for a variety of reasons. A supportive climate is less likely to create interpersonal tensions as needs and wants can be expressed. There is communication of concerns, problems, and possible misunderstandings with aspects of tasks required. The experience of support also satisfies important affiliative needs (Holahan & Moos, 1981; Shinn, Rosario, Morch & Chestnut, 1984).

A range of possible supports is also available outside the work environment. These include partners, parents, community members, and providers. People vary in the life-strains experienced depending on the

importance they place on the role, and in their degree of perceived stress. Pearlin and Schooler (1978) identified a number of life-strain factors within the roles of marriage, parenting, and household economics. There may be a degree of overlap in strains felt at home and in the work environment (Glowinkowski & Cooper, 1985). The stress felt may also be due to differences in how a person perceives a situation ought to be, compared to how a situation actually is in reality.

Cooper (1986) suggested that home was seen as a place of refuge from the competitive and demanding environment of work. Home was the 'sanctuary', that provided a kind and supportive domestic environment. The realities of domestic life can be rather different. There are concerns regarding the family's economic and social future, and conflict due to frustrations with role expectations both as a parent and as a spouse (Pearlin & Schooler, 1978).

Symptoms of distress

There are a number of distress symptoms. These vary due to individual differences. Commonly identified symptoms of distress are burnout (e.g., emotional exhaustion), somatic symptoms, and maladjustive behaviours.

Prior research that has examined burnout has primarily been used with occupational samples that are in the helping professions (Handy, 1988). As

such, burnout has been defined as "... a syndrome of physical and emotional exhaustion involving the development of negative self-concept, negative job attitudes, and loss of concern and feeling for clients" (Maslach, 1978, p. 233). Maslach and Jackson (1981) identified three characteristics of burnout: depersonalisation (i.e., development of negativity); perceived lack of personal accomplishment (i.e., decreased feelings of competence and successful achievement); and emotional exhaustion (i.e., inability to give of oneself at a psychological level).

Emotional exhaustion has been identified as an adequate and useful measure of possible future psychological concerns (Barling & MacIntyre, 1993). Firstly, factor analysis studies have consistently shown emotional exhaustion as the primary factor of burnout (Fimian & Blanton, 1987; Maslach & Jackson, 1981). Secondly, emotional exhaustion has been identified as the first stage in the process of burnout, a useful stage for intervention (Barling & MacIntyre, 1993).

Another good indicator of distress is somatic symptoms (e.g., eye twitching) and maladjustive behaviours (e.g., excessive eating or alcohol intake or both) (Cooper, Sloan, & Williams, 1988). These indicators are physical manifestations of distress. Psychological symptoms may be more easily denied than the physical symptoms of distress. The predictive variables

seem to contribute to the degree of distress experienced. Investigations that have examined the predictor variables have also aimed to explain the underlying process in which they are interrelated with distress.

Stress and coping effects models

There are a number of different models that can be used to represent the relationship between role stressors, coping styles, social resources and symptoms of stress. Although these factors have often been considered important, there is considerable disagreement as to the underlying process by which they are interrelated (Edwards et al., 1990). The models that will be examined are the direct effects, buffering effect, and mediating effects.

Direct effects model

The direct effects model posits that the stressor, coping behaviour, and social resource independently influence symptoms (see Figure 1). The stressor, and 'inadequate' social support both increase symptoms, whereas coping generally reduces symptoms. However, implemented coping behaviours have been found to have either a positive or negative effect on symptoms depending on their appropriateness to the situation. For example, it may be more appropriate to implement problem-focused coping behaviours in a work setting rather than emotion-focused coping behaviours.

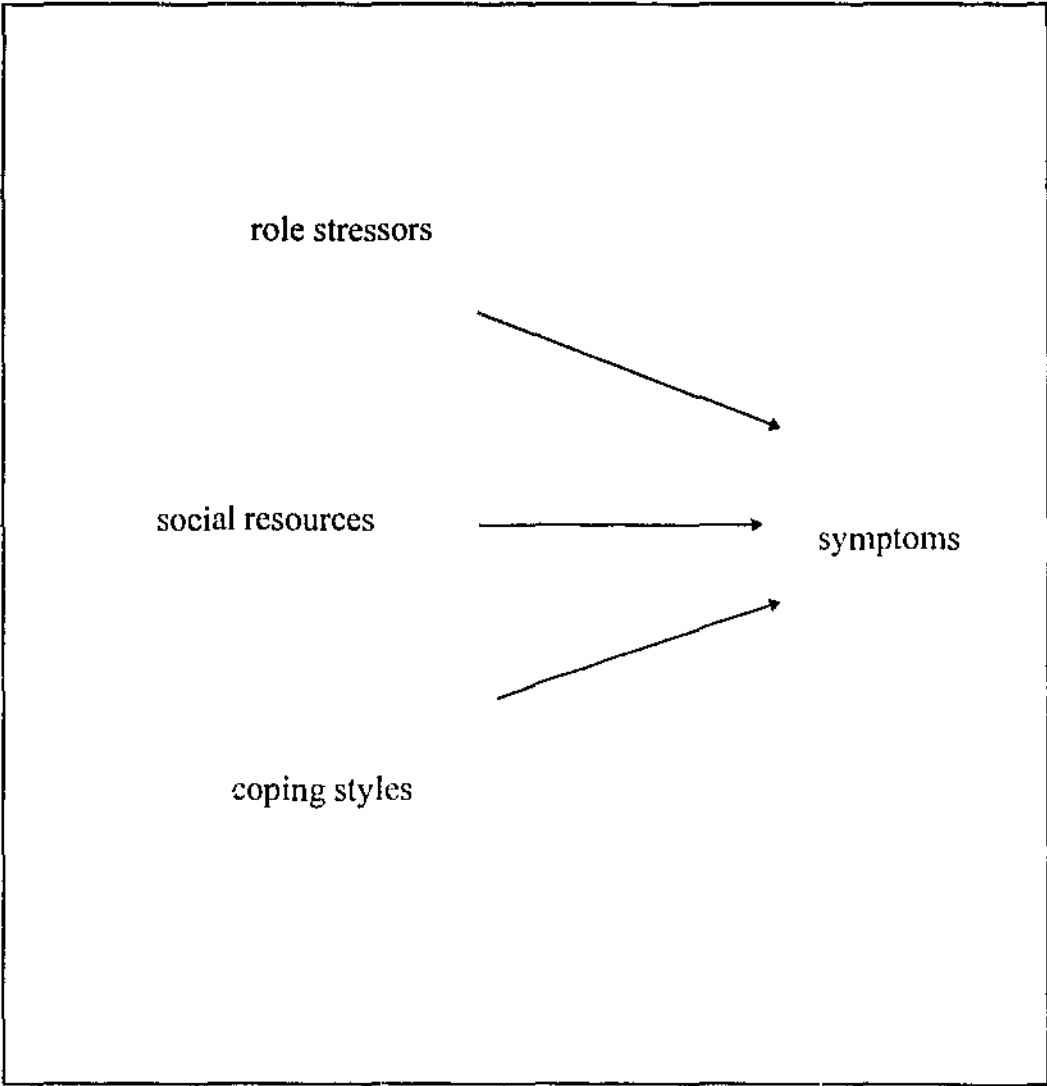


Figure 1. Direct effects model showing the independent influence of role stressors, social resources, and coping styles on distress symptoms

Buffering effects model

Some researchers have concluded that, as there is a rather modest relationship between stressors and symptoms, various factors buffer the impact of the stressors (Edwards et al., 1990) (see Figure 2). Possibly, strong social resources, and the use of effective coping behaviours modify the stressor-symptom relationship. Studies on the buffering effects of coping suggest that problem-focused and appraisal-focused coping buffer the effects of stress, whereas emotion-focused coping exacerbates its effects (Edwards & Baglioni, 1990). The concept of a buffering effect has been used to explain the relationship between stressors, symptoms and social support (Cohen & Wills, 1985; House & Wells, 1978; Kirmeyer & Dougherty, 1988). However this support has not been universal (Seers, McGee, Serey & Graen, 1983; Shaw, Fields, Thacker & Fisher, 1993) with others showing mixed results (LaRocco, House & French, 1980; Terry, 1991).

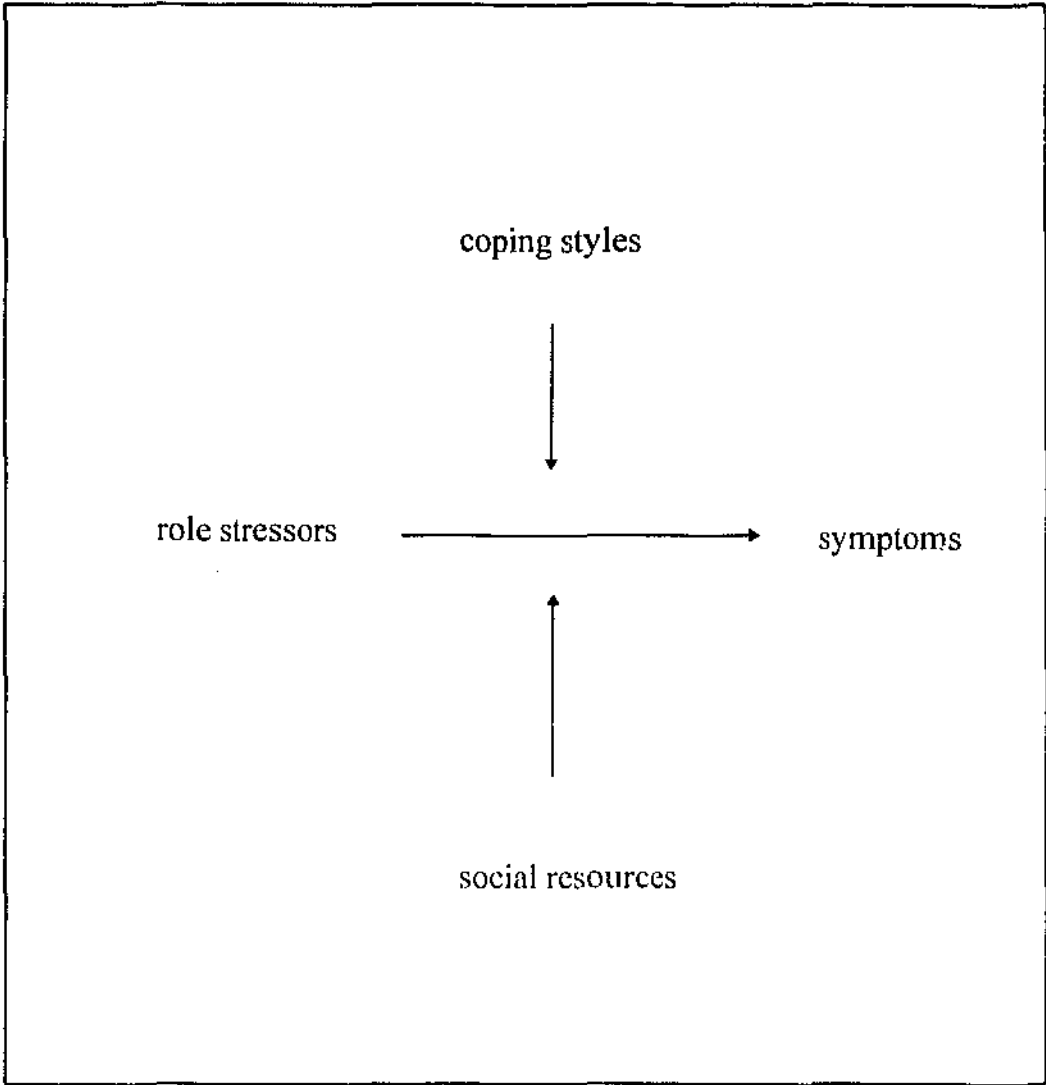


Figure 2. Buffering effects model showing social resources and coping styles reducing the influence of role stressors on distress symptoms

Mediating effects model

This model suggests that stress not only increases symptoms, but also activates coping which in turn influences symptoms (Figure 3). When the mediators are negatively related to symptoms (e.g., support of competent others and problem-focused coping) the result is an overall reduction of symptoms. When the mediators are positively related to symptoms (e.g., low support and emotion-focused coping) there is an overall increase in symptoms. There is a large number of articles that refer to social resources and coping as mediating variables, however, few attempt to mathematically validate the claim (Edwards & Baglioni, 1990; Endler & Parker, 1990; Robertson, Cooper, Williams, 1990).

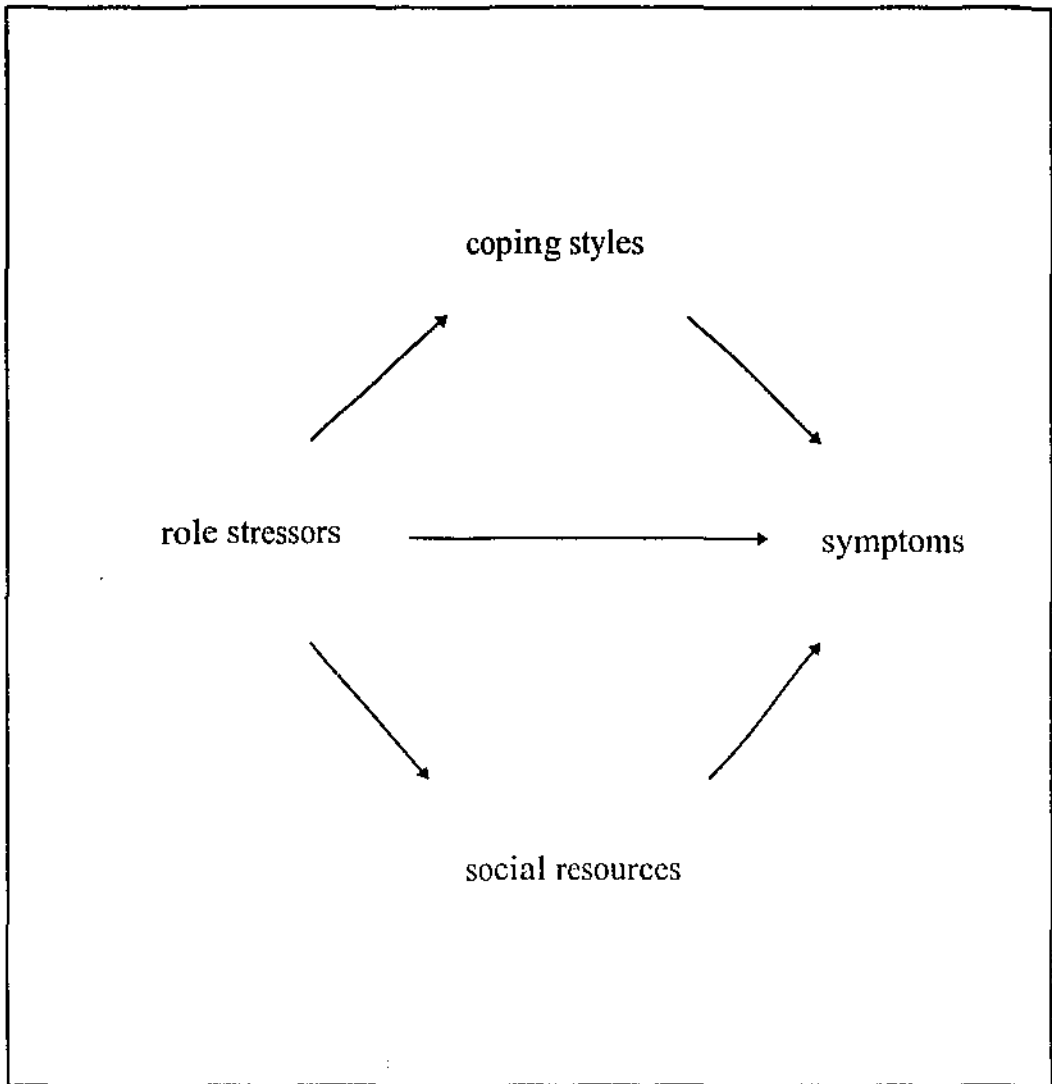


Figure 3. Mediating effects model showing social resources and coping styles directly and indirectly influencing the role of stressors on distress symptoms

The present study

The present study examines the utility of various coping models in different occupational settings. The purpose of these models is to explain the relationship between social resources, coping styles and role stress in influencing symptoms of distress.

Three hypotheses are being tested:

1. Problem-focused and appraisal-focused coping styles and supportive social resources reduce the effect of role stress, whilst emotion-focused coping styles and lower levels of social support increase role stress.
2. Positive coping styles (i.e., problem-focused and appraisal-focused) and supportive social resources buffer the effect of role symptoms on role stress.
3. Positive coping styles (i.e., problem-focused and appraisal-focused) and supportive social resources mediate the effect of role symptoms on role stress.

Method

Participants

One hundred and fifty employees from public and private sector organisations were approached and asked to participate in the investigation. A total of 126 participants returned the surveys, 5 of which had missing data and were therefore excluded. Analysis was conducted on 120 subjects, 70 males and 50 females, as one participant was identified as a univariate and multivariate outlier for variables emotional exhaustion, symptoms of distress and social support. This participant was deleted from the sample.

The sample consisted of 41 managers and coordinators, 17 health workers and teachers, 19 computer specialists, 32 clerical and sales staff, and 10 cartographers and artists. Participants ranged in age from 19 to 62 years ($M = 35.53$, $SD = \pm 9.20$) with an average of 4 years in their current position ($SD = \pm 4.38$).

Materials

The questionnaire consisted of four sections that covered symptoms of distress, role stressors, coping styles, and social resources (Appendix A).

Symptoms of distress. Two symptom-dimensions were measured to determine the level of distress the employee was currently experiencing. This

was achieved by measuring the quantity and severity of currently experienced psychological symptoms (i.e., emotional exhaustion) and physical symptoms (i.e., somatic symptoms and maladjustive behaviours).

The questionnaire entitled 'How you assess the effects of your job' examining emotional exhaustion, is a subscale of the Maslach Burnout Inventory (Maslach & Jackson, 1981). The scale contains nine items that assess the feelings of being emotionally overburdened by one's work. Answers were recorded on a Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree).

The emotional exhaustion subscale's reliability and validity have been well documented (Fimain & Blanton, 1987; Koeske & Koeske, 1989; Kottkamp & Travlos, 1986; Maslach & Jackson, 1981). Koeske and Koeske (1989) reported exhaustion with an internal consistency coefficient alpha score of .89. The full versions of the Maslach Burnout Inventory assess both frequency and intensity of feelings. These dimensions are so strongly correlated only the intensity subscale was used in a number of subsequent studies (Barling & MacIntyre 1993; Kottkamp & Travlos, 1986).

The participants' physical symptoms of distress were examined via Cooper et al.'s (1988) 'Your physical health' subscale. It is a 12-item subscale from the Occupational Stress Indicator that requested participants to indicate

the frequency of occurrence of various distress related ailments. The scale examined two types of distress symptoms, somatic symptoms (e.g., muscle trembling) and maladjustive behaviours (e.g., excessive food intake). These were scored on a scale ranging from 1 (never) to 6 (very frequently). An acceptable split-half reliability coefficient of .73 ($p < .01$) was reported by Cooper et al., (1988). Independent support has also been found for the scale's validity (Robertson et al., 1990).

Role stressors. The questionnaire 'Pressure in your job role' examined the role stressors: ambiguity (items 2, 3, 5, 7, 11, 16), conflict (items 4, 6, 8, 10, 12, 13, 15, 17), and overload (items 1, 9, 14). Items were rated by the participant on a scale ranging from 1 (strongly disagree) to 7 (strongly agree). The questions were taken from two sources: role ambiguity and conflict (Rizzo et al., 1970), and role overload (Beer et al., 1976).

The shortened version of Rizzo et al.'s (1970) scale was used here as the longer form was considered too long for the present study. Role ambiguity items were reverse scored. Higher scores indicated higher levels of perceived role ambiguity and role conflict.

Reliability and validity for Rizzo et al.'s (1970) instrument has been extensively reported (Burke & Belcourt, 1974; Latack, 1986; Murphy & Gable, 1988; Rizzo et al. 1970; Tracy & Johnson, 1981). Although questions

have been raised as to the effect of positively wording one dimension of the scale and negatively wording the other, subsequent investigations have not substantiated this criticism (House, Schuler, & Levanoni, 1983). Furthermore, studies also support the independence of the two scales (Kelloway & Barling, 1990).

Beehr et al.'s (1976) three item scale was used to examine role overload. The score on the first question was reversed. The three item scale reported a reliability score of .56 (Spearman-Brown median inter-item correlation). Cronbach's alpha coefficient for internal consistency for this subscale was .63 (Barling & Macintyre, 1993).

Coping styles. The scale labelled 'How you cope with stress you experience' examined coping styles. It is the shortened version of the Cybernetic Coping Scale (CCS) and comprised of 20 items (Edwards & Balioni, 1993). Participants rated their use of the coping behaviours on a scale ranging from 1 (did not use at all) to 7 (used very much). This scale examined the use of five types of coping: accommodation (items 2, 6, 11, 16), change situation (items 1, 5, 10, 15), avoidance (items 4, 8, 13, 18), devaluation (items 3, 7, 12, 17) and symptom management (items 9, 14, 19, 20). Confirmatory analysis using Cronbach's alpha strongly supports reliability as all five subscales' reliability scores all exceeded .79 (Edwards et al., 1993). A

confirmatory factor analysis also provided moderate support for the construct validity (Edwards et al., 1993).

Social resources. Social resources were measured by the scale 'Who you can depend on.' House and Wells (1978) constructed this scale to measure social support from a participant's immediate supervisor (items 1a, 2a, 3a, 4a, 4b, 4c, 4d), others at work (items 1b, 2b, 3b), spouse (items 1c, 2c), and friends and relatives (items 1d, 2d). The scale requested participants to rate how helpful each of these persons was in the context of work-related stress. Participants rated how supportive they perceived each relationship on a scale ranging from 0 (not at all) to 3 (very much). The scale also included additional questions on the subjects' perception of their supervisor's competence. The measure has been reported as moderately reliable with the four subscales' alpha coefficients ranging from .75 to .92 (House, 1981). One small modification was made to the scale. The present study sought to accommodate changing societal values by the addition of 'defacto' to the questions that asked about support from the marriage partner (husband or wife). This alteration was made to improve the representation of support from intimate relationships.

This investigation provided an additional examination of the reliability of all the measures. Cronbach's (1951) alpha coefficient was used. All scales

were considered to have satisfactory levels of reliability. Descriptive and psychometric results for each of the scales are presented in Table 1.

Table 1

Descriptive and Psychometric Data for Measuring Role Stressors, Social Resources, Coping, and Symptoms

Variables	No. of items	M	SD	Cronbach's Alpha
Role Stressors				
Role ambiguity	6	20.58	7.04	.78
Role conflict	8	31.51	9.46	.84
Role overload	3	11.81	4.10	.70
Social Resources				
Supervisor	6	12.42	4.37	.91
Others at work	3	5.83	1.92	.75
Partner	2	3.68	2.41	.96
Friends and relatives	2	3.45	1.89	.83
Coping				
Accommodation	4	15.17	4.71	.77
Change the situation	4	17.78	4.99	.83
Devaluation	4	13.33	5.09	.81
Avoidance	4	12.55	5.15	.83
Symptom reduction	4	16.61	5.31	.76
Symptoms				
Emotional exhaustion	9	24.41	8.77	.90
Physical symptoms	12	29.22	8.65	.84

Procedure

Each participant was given the questionnaire booklet to be completed within one week. The questionnaire booklet consisted of a covering letter that briefly outlined the study's purpose and requested the recipient's participation in the project. The covering letter (Appendix B) also emphasised the confidential nature of the study and participation was on a strictly voluntary basis. Participants were also given a separate 'Letter of Informed Consent' form. This notified them of their right to withdraw their consent to participating in the investigation at any time. Furthermore, participants were given the option of receiving a summary version of the overall group results.

The surveys that examined distress symptoms asked participants to reflect on their current feelings of emotional exhaustion and physical reactions to work stress. The remaining survey subscales asked participants to reflect on role stressors, coping behaviours, and social support over the previous three weeks.

Results

Preliminary data analysis was conducted to examine possible confounding variables. No significant differences were found on most of the various demographic variables examined (i.e., age, new vs. established employees). Males reported significantly higher scores for role ambiguity and role conflict (see Table 2). However, there were no significant differences between the sexes in either emotional exhaustion or physical symptoms. The purpose of the stressors in the investigation was to examine the relationship between them and the symptoms. Reported differences in gender scores did not adversely affect the investigation into the 'stress and coping' models.

Multiple regression (MR) was employed to determine which of the stress models (direct effects model, buffered effects model, and mediated effects model) adequately describe the relationship between the role stressor, coping behaviour, social support, and distress symptoms. Analysis was performed using SPSS REGRESSION with assistance from SPSS SUMMARIES and CORRELATE, in the testing of assumptions.

Table 2

Means and Standard Deviations, and t-tests of Male and Female Participants to Examine Gender Differences in Role Ambiguity, Role Conflict, Emotional Exhaustion, and Physical Symptoms of Distress

Dependent Variable	Males n=70		Females n=50		t(118)
	M	(SD)	M	(SD)	
Role Ambiguity	22.14	(6.03)	18.38	(7.80)	2.86**
Role Conflict	34.17	(8.00)	27.78	(10.14)	3.71**
Role Overload	12.41	(3.93)	10.98	(4.23)	1.89
Emotional Exhaustion	25.65	(7.97)	22.66	(9.60)	1.81
Physical Symptoms	29.23	(8.46)	29.20	(9.01)	0.02

*p < .05. **p < .01 two tail test.

Data screening. Results from the testing of assumptions resulted in the deletion of one subject. This subject presented univariate outliers in two variables, and also showed as a multivariate outlier (Mahalanobis' distance criterion of $p < .001$). The variable that examined the participant's support via an intimate relationship (i.e., 'Your wife, husband, or defacto') showed a negative kurtosis. The partnership variable therefore was converted into a dichotomous variable. The relationship towards the participant and partner was seen as either supportive or non-supportive. All other variables were acceptable in their normality, linearity and homoscedasticity of residuals, $N=120$.

Table 3 shows intercorrelations among all variables. There was no evidence of multicollinearity or singularity among predictor variables.

The relationship between the coping styles (i.e., accommodation, change situation, devaluation, avoidance, and symptom reduction) and the measures of physical and psychological distress is of particular interest (see Table 3). A non-significant relationship was reported with the problem-focused measure of 'change the situation'. The remaining variables that represent emotion-focused measures (i.e., avoidance and symptom reduction) and reappraisal (i.e., devaluation and accommodation) were significantly positively related to higher scores of distress.

Table 3

Correlations of Role Stressors, Social Resources, Coping Styles and Symptoms.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Physical symptoms	(.76)													
2. Emotional exhaustion	.63**	(.90)												
3. Role ambiguity	.13	.31**	(.78)											
4. Role conflict	.25**	.52**	.43**	(.84)										
5. Role overload	.28**	.50**	.24**	.68**	(.70)									
6. Supervisor	-.18*	-.26**	-.37**	-.33**	-.19*	(.91)								
7. Others at work	-.09	-.19**	-.06	-.18	-.10	.21*	(.75)							
8. Partner	-.23*	-.07	.05	.14	.06	-.14	.11	(.96)						
9. Friends and relatives	.03	-.09	-.14	-.15	-.09	-.00	.28**	.25**	(.83)					
10. Accommodation	.38**	.35**	.02	.16	.17	-.06	-.06	-.01	.15	(.77)				
11. Change the situation	.04	.05	-.03	.18*	.19*	-.00	-.03	-.12	.04	.20*	(.83)			
12. Devaluation	.40**	.48**	.24**	.34**	.20*	-.23*	-.24**	-.03	.11	.62**	.09	(.81)		
13. Avoidance	.32**	.47**	.24**	.30**	.22*	-.13	-.18*	-.03	-.05	.66**	.01	.78**	(.83)	
14. Symptom reduction	.27**	.36**	.05	.17	.18*	-.05	.14	-.12	.12	.41**	.36**	.36**	.38**	(.76)

Note: Reliabilities [Cronbach's (1951) coefficient alpha] in parentheses along main diagonal. * $p < .05$ (two tail test) ** $p < .01$ (two tail test)

Model Analysis. Details regarding the MR analysis are presented separately for each model.

Direct Effects Model. Six separate MR analyses were used to test the direct effects model. In each MR the predictors were the subscales that made up the components of the model (i.e., role stressors, coping behaviours, and social resources). In the case of role stressors, the predictors in the MR were: role ambiguity, role conflict, and role overload (Table 4). Social resources had the predictive variables of: supervisor, others at work, partner, and friends and relations (Table 5). Coping styles examined the predictive variables: accommodation, change the situation, devaluation, avoidance, and symptom reduction (Table 6). The criteria used for all the scales were emotional exhaustion and physical symptoms.

The direct effects model seemed to be supported. However, there was considerable variation between the different variables' predictive values. The results indicate that the role stressors, conflict and overload, were substantial predictors of distress, however, ambiguity is minimally predictive. Social support also presented varying levels of the predictor variables. The supervisor variable was most effective in determining well-being of participants. The other variables were noticeably less effective. The variable that measured partner's support was marginally related to levels of emotional exhaustion but

was strongly related to physical symptoms. The coping style variables also varied in their predictive strength. Avoidance behaviours showed the strongest relationship with emotional exhaustion. The responses were very different for the criterion physical symptoms. The coping style devaluation was the most predictive of physical symptoms.

Overall, most MR results reported significant relationships between the category predictors and variable criteria. The relationship between social support and physical symptoms was the only one that was not significant (Table 5).

Table 4

Direct Effects Model

Summary of Simultaneous Regression Analysis for Role Stressors Predicting Emotional Exhaustion and Physical Symptoms (N = 120)

Variable	Emotional Exhaustion β	Physical Symptoms β
Role Stressors		
Ambiguity	.13	.04
Conflict	.25*	.10
Overload	.32*	.18
R	.59*	.28*
R ²	.34	.08
Adj R ²	.33	.05

(*p < .05)

Table 5

Direct Effects Model

Summary of Simultaneous Regression Analysis for Social Resources Predicting Emotional Exhaustion and Physical Symptoms (N = 120)

Variable	Emotional Exhaustion β	Physical Symptoms β
Social Resources		
Supervisor	-.24*	-.20*
Others at work	-.13	-.06
Partner	-.06	-.20*
Friends & relations	-.04	.09
R	.30*	.28
R ²	.09	.08
Adj R ²	.06	.04

(*p < .05)

Table 6

Direct Effects Model

Summary of Simultaneous Regression Analysis for Coping Styles Predicting Emotional Exhaustion and Physical Symptoms (N = 120)

Variable	Emotional Exhaustion β	Physical Symptoms β
Coping Styles		
Accommodation	-.09	.22
Change situation	-.03	-.07
Devaluation	.22	.28*
Avoidance	.31*	-.09
Symptom reduction	.14	.14
R	.52*	.45*
R ²	.27	.20
Adj R ²	.23	.17

(* $p < .05$)

Buffering Effects Model. Hierarchical MR was used to examine the buffering effects model to determine whether coping styles and social support accounted for a significant proportion of the variance. After role stressors (ambiguity, conflict, overload) had been statistically controlled, the relevant predictor variables were tested. Table 7 examines the buffering effect of coping styles (i.e., accommodation, change the situation, devaluation, avoidance, symptom reduction). Table 8 examines the buffering effect of social support variables (i.e., supervisor, others at work, partner, friend and relations). The buffering effects of coping styles and the social support were analysed separately to avoid partialing their effects from one another (Edwards et al., 1990).

The analysis appears at first sight to support a buffering effect relationship for coping styles (Table 7). However, bivariate correlational results need to be considered. Results from Table 3 suggest that greater use of coping styles is associated with greater symptoms of distress. The relationship is not a buffering effect, rather use of coping styles is positively related to participants' increased distress.

There was no support for a buffering effect for social support. Once role stressors were controlled there was no significant change in participants' emotional exhaustion (Table 8). A relationship between social resources and

physical symptoms was not expected as it did not occur in the direct effects model.

Table 7

Buffering Effects Model

Summary of Hierarchical Regression Analysis of Coping Styles as a Buffering Predictor of Emotional Exhaustion and Physical Symptoms (N = 120)

Variable	Emotional Exhaustion β	Physical Symptoms β
Step 1.		
Role stressors		
Ambiguity	.13	.04
Conflict	.25	.10
Overload	.32*	.18
R	.59*	.28*
R ²	.34	.08
Adj R ²	.33	.05
Step 2.		
Role stressors		
Ambiguity	.09	.04
Conflict	.16	.02
Overload	.33*	.19
Coping Styles		
Accommodation	-.01	.25
Change situation	-.07	-.11
Devaluation	.16	.27
Avoidance	.17	-.15
Symptom reduction	.14	.13
R	.68*	.50*
R ²	.47	.25
Adj R ²	.43	.19
ΔR^2	.12*	.17*

(*p < .05)

Table 8

Buffering Effects Model

Summary of Hierarchical Regression Analysis of Social Resources as a Buffering Predictor of Physical Symptoms and Emotional Exhaustion (N = 120)

Variable	Emotional Exhaustion β	Physical Symptoms β
Step 1.		
Role stressors		
Ambiguity	.13	.04
Conflict	.25*	.10
Overload	.32*	.18
R	.59*	.28*
R ²	.34	.08
Adj R ²	.33	.05
Step 2.		
Role stressors		
Ambiguity	.11	.01
Conflict	.25*	.15
Overload	.30*	.15
Social Resources		
Supervisor	-.08	-.12
Others at work	-.12	.15
Partner	-.16	.29*
Friends & relations	.07	.12
R	.63*	.41*
R ²	.39	.16
Adj R ²	.36	.11
ΔR^2	.05	.09*

(*p < .05)

Mediating Effects Model. Role stressors may have indirect effects on symptoms via social resources and coping styles. That is, social resources or coping styles may mediate the effects of symptoms on role stressors. To test the mediating effect, Baron and Kenny (1986) state that three condition must hold. Firstly, role stressors should be related to social resources or coping styles. Secondly, the role stressors should be related to the distress measurements. Thirdly, the relationship between role stressors and distress measurements should be non-significant when the effects of the mediators are controlled (i.e., social resources, coping styles, or both).

The first set of analyses consisted of nine multiple regression (MR) tests that examined the direct effects of the stressors (i.e., role ambiguity, conflict, and overload) on the variables within the mediator categories of social resources (Table 9) and coping styles (Table 10). Two variables showed significant relationships to the stressors - supervisor support and the coping style of devaluation.

Table 9

Mediating Effects Model

Summary of Simultaneous Regression Analysis for Variables of Role Ambiguity, Role Conflict, and Role Overload predicting Social Resources (N = 120)

Variable	Supervisor β	Others at work β	Partner β	Friends & relations β
Role Stressors				
Ambiguity	.29*	.00	-.02	-.09
Conflict	.23	-.18	.20	-.12
Overload	.02	-.02	-.10	.04
R	.43	.20	.15	.16
R ²	.19	.04	.02	.02
Adj R ²	.16	.02	.00	.00

(*p < .05)

Table 10

Mediating Effects Model

Summary of Simultaneous Regression Analysis for Variables of Role Ambiguity, Role Conflict, and Role Overload predicting Coping Styles (N = 120)

	Accommodation	Change situation	Devaluation	Avoidance	Symptom reduction
Variable	β	β	β	β	β
Role Stressors					
Ambiguity	-.07	-.12	.11	.14	-.03
Conflict	.13	.15	.33*	.20	.10
Overload	.06	.13	-.07	.05	.09
R	.16	.24	.35*	.33*	.17
R ²	.03	.06	.12	.11	.03
Adj R ²	.00	.03	.10	.08	.00

(* $p < .05$)

The second set of analyses consisted of six MR analyses to examine the relationship between role stressors (i.e., role ambiguity, conflict, and overload) and stress symptoms (emotional exhaustion and physical symptoms). These analyses were also conducted to explain the direct effects model (Tables 5 and 6). In summary, the results indicated significant relationships for all but the relationship between physical symptoms of distress and social support.

The third set of analysis examined whether there were significant relationships between the role stressors and stress symptoms once the mediating variables were controlled. Four hierarchical MR analyses were conducted. Table 11 examines the proportion of variance role stressors accounted for after social resources (supervisor, others at work, partner, friends and relations) were statistically controlled. Table 12 examines the proportion of variance role stressors accounted for after coping styles (accommodation, change the situation, devaluation, avoidance, symptom reduction) were statistically controlled.

Non-significant results for variables tested in these analyses were required to support the possibility of a mediating relationship. This occurred for one of the analyses. The analysis utilised coping styles as the mediating variable and physical symptoms as the criterion measurement (Table 12).

Results did not seem to support the mediating effects model. The coping style devaluation could possibly be seen as a mediator between the influence of role stressors on physical symptoms. However, again there is the question of the positive relationship between the high usage of the coping styles and high distress symptoms.

Table 11

Mediating Effects Model

Summary of Hierarchical Regression Analysis for the Social Resource Variables Predicting Emotional Exhaustion and Physical Symptoms (N = 120)

Variable	Emotional Exhaustion β	Physical Symptoms β
Step 1.		
Social Resources		
Supervisor	-.25	-.20*
Others at work	-.17	-.01
Partner	-.11	-.26*
Friends & relations	.01	.08
R	.36*	.31*
R ²	.13	.10
Adj R ²	.10	.06
Step 2.		
Social Resources		
Supervisor	-.08	-.12
Others at work	-.12	.02
Partner	-.16*	-.29*
Friends & relations	.07	.11
Role Stressors		
Ambiguity	.11	.01
Conflict	.25*	.15
Overload	.30*	.15
R	.63*	.41*
R ²	.39	.16
Adj R ²	.36	.11
ΔR^2	.27*	.07*

(* $p < .05$)

Table 12

Mediating Effects Model

Summary of Hierarchical Regression Analysis for the Coping Style Variables Predicting Emotional Exhaustion and Physical Symptoms (N = 120)

Variable	Emotional Exhaustion β	Physical Symptoms β
Step 1.		
Coping Styles		
Accommodation	-.09	-.01
Change situation	.03	-.07
Devaluation	.22	.16
Avoidance	.31*	.17
Symptom reduction	.14	.14
R	.52*	.68*
R ²	.27	.47
Adj R ²	.23	.43
Step 2.		
Coping Styles		
Accommodation	-.01	.25*
Change situation	-.07	-.11
Devaluation	.16	.27*
Avoidance	.17	-.15
Symptom reduction	.14	.13
Role Stressors		
Ambiguity	.08	.04
Conflict	.16	.02
Overload	.33*	.19
R	.68*	.50*
R ²	.47	.25
Adj R ²	.43	.19
ΔR^2	.20*	.04

(*p < .05)

Discussion

The aim of the present study was to examine the occupational stress process via stress and coping models. The study proposed that an understanding of employees' well-being lies with gaining knowledge about the employees' perception of available social resources (i.e., supervisor, colleagues, partner, friends and family support) and the types of coping strategies they used to respond to role stressors. Three models were examined - direct effects model, buffering effects model and mediating effects model. The models varied in their complexity, and are not directly comparable. Overall, the examination seems to suggest that there is limited support for stress and coping models beyond the direct effects model. The process of occupational stress seems to be dynamic and bi-directional in nature (Lazarus, 1991). The models buffering and mediating, though complex, may still be too simplistic to explain the occupational stress process.

Initial examination of bivariate correlations provided an insight to the

positive relationship between appraisal-focused coping and distress levels. This is contrary to Edwards et al.'s (1990) findings but supports research by Latack (1986). Support was found for the positive relationship between emotion-focused coping and distress.

A number of explanations may account for the relationship between emotion-focused coping, appraisal-focus coping and distress. The two coping strategies may: (a) be ineffective means of dealing with work stressors, or used by inefficient copers (Edwards et al., 1990; Pearlin & Schooler, 1978); (b) be called upon when people perceive they are overwhelmed with the situation (Edwards et al., 1990; Folkman & Lazarus, 1985); (c) alleviate distress, as the distress would be far greater without the coping strategy (Pearlin & Schooler, 1978). Chosen coping styles may also be influenced by available resources. As expected, the predictor variables that represent social resources showed negative relationships with emotional and physical distress (i.e., high social support was related to low distress). Explaining the stress and coping processes may be clearer with the use of models.

The Direct Effects Model required the examination of the sets of predictors via simultaneous regression analysis. Support was found for this, the simplest of the three models. Each set of predictors (i.e., role stressors, social resources, and coping styles) contributed significantly to the criterion

measure of emotional exhaustion. Role stressors and coping style also contributed significantly to the criterion of physical symptoms of distress. Surprisingly, social resources were not significantly related to physical symptoms. Possibly, the subjective evaluation of physical symptoms may not be a sensitive enough method to identify distress symptoms. Physiological tests may provide more objective measurement (e.g., blood pressure, cholesterol levels). Another possible explanation for the non-significant result could be that people vary in their awareness of physical symptoms, and do not acknowledge certain maladjustive behaviours (e.g., excessive eating). Though support was available for the direct effects model, this model does not take into account the relationship between the predictor variables in the stress and coping process.

The Buffering Effects Model was given limited support by both coping styles and social resources. On first appearance there seems to be strong support for buffering effects for coping styles, however, 'buffering' suggests a reduction when implementing the coping strategy. As mentioned earlier in the discussion, the bivariate correlations suggest a positive relationship exists between significant coping styles and participant's reported distress. If the coping styles were buffering then the expected relationship would be negative (i.e., reduce the influence of stress).

The suitability of emotion-focused and appraisal-focused coping within the work environment may be questionable as these behaviours may be detrimental to work relationships. The use of coping behaviours may be linked to the types of social relationships developed at work. The exhibited emotion-focused coping behaviours may be seen as characteristics of the person, that is, they may be labelled as lazy or overtly emotional. A person that relies on using appraisal-focused coping behaviours may be seen as easily manipulated and weak.

The present study found no significant support existed for the buffering effect of social support. LaRocco et al. (1980) suggested that many of the studies proposing the buffering effect may have methodological differences, limitations, or other influencing factors (e.g. characteristics of the sample). The main reason for the difference between this investigation and the study conducted by House and Wells (1978) was the selected significance level. The present study chose the accepted significance level of $p < .05$, whereas House and Wells' (1985) study chose $p < .10$. If the present study had used $p < .10$ then 'physical symptoms' would have shown a significant change, and supported the presence of a buffering effect. Emotional exhaustion did not indicate a significant change with $p < .10$ level. A possible explanation is that physical manifestations of distress may be exhibited due to lack of social support, whilst subjects may not acknowledge their mental distress. Persons

lacking social skills may also be less aware of their psychological well-being (i.e., level of emotional exhaustion).

The buffering hypothesis suggests people reduce the influence of stress by varying degrees, however, social relations can also be viewed as potential sources of stress. The Buffering Effects Model does not seem to acknowledge social interactions as potential cause of distress. Furthermore, participants' level of competence in performing their job requirements may contribute to the type of social relations that exist within the work setting and the reasons for the experienced stress (Brief & Atieh, 1987).

The Mediating Effects Model offers another complex explanation of the stress and coping process. James and Brett (1984) set three stages of analysis to explain aspects of the Mediating Effects Model. The evaluation is far more stringent than the other two models. The Mediating Effects Model suggests that stressors not only increase symptoms, but also activate coping behaviours and the reliance on social support, which in turn influences symptoms (Edwards et al., 1990).

A prior investigation suggested that excessive exposure to stressors stimulates maladaptive coping (i.e., emotion-focused coping) and inhibits adaptive coping (i.e., problem-focused coping) (Shinn et al., 1984). This seems inconsistent with the Mediating Effects Model (Edwards et al., 1990). Lazarus

and Folkman (1987) suggested that emotion-focused coping styles may be appropriate, depending on the situational context. For example, short term highly stressful occurrences such as death of a loved one may best be handled by emotional-focused coping strategies. However, over-reliance on such strategies as avoidance, or denial become part of the problem, especially in the work environment where situations have to be confronted. Over-reliance on emotion-focused or appraisal-focused coping may reflect workers' feelings of not being able to control their surroundings (Lazarus, 1991).

The evaluation of the Mediating Effects Model shows only a tentative relationship between the role stressors and mediators. The coping style devaluation and the social resource supervisor support were the only variables significantly related to role stressors. Another evaluation criterion was for the relationship between the mediator and the symptoms to be non-significant whilst the role stressors were controlled. This was not the case. The rigidity and complexity of the mediating effects evaluation may account for the non-result. Another factor that may influence the results may be the major mind shift from being in control (i.e., able to use problem-focused coping) and dealing with the situation without a sense of control (i.e., reverting to emotion-focused coping). The mediating model may be useful in examining varying degrees of problem-focused coping responses to stressors. This model

does not seem appropriate when examining social resources owing to the difference between the need for social support and available social support.

The relationship between social support and stressors may be better represented by a feedback loop. The interactive nature of social forces and coping strategies could be explained. Lazarus's (1966) transactional theory suggests coping is a continual assessment-action relationship. Acceptable behaviour may be evaluated by not only a subject's own beliefs and values but those of other people. The fit of the person with their work environment seems to be crucial in their ability to manage stress.

The fit seems to go beyond that of performing the work tasks adequately to the requirement of a worker to develop adequate social networks. The coping styles a person relies on could also be seen as important in whether they gain acceptance from others. The present study provides some support for this as bivariate correlations indicate some significant relationships between supervisor support, colleague support, and the used coping styles. Supervisor support was the most effective indicator of participants' physical and emotional well-being. This is not surprising as the employee's relationship with the supervisor may have direct influence on experienced role stressors. An employee may see the task of the supervisor to clarify role expectations, set reasonable tasks, and expect realistic work output.

A number of occupational stress and coping areas have had limited investigation or are yet to be explored. People's ability to alter behaviour and adapt to their situation may be worthy of further investigation. The range of coping behaviours within a person's repertoire may assist in his or her ability to adapt (e.g., does it include humour, or a belief in God?) (Pearline & Schooler, 1978). Another area yet to be investigated is how people alter their coping depending on expectations (i.e., different work positions, or different occupations). Are there differences between people's reported coping styles and their actual behaviours? (i.e., reported by independent observers). There are also a number of research possibilities for investigation into social support, for example, how social resources alter people's methods of coping. Further investigation could also extend the existing research that has examined the relationship between personality characteristics and coping styles.

The complexity of the stress-coping process creates difficulties in accounting for the large number of influencing factors. Personality traits influence both the social acceptability of a person and his or her perceived stress experience. These traits include: level of self esteem, introvert-extrovert orientation, A-B personality types, and personal hardiness (Lang & Markowitz, 1986; Parkes, 1990). Factors external to the person are also important when considering influences on the stress-coping process (e.g., death in family, illness). Life stressors may also influence which work coping

responses are chosen (e.g., marital problems). The individual's stress process is a complex series of interrelationships that are also influenced by larger social systems.

Future research could examine how organisational change influences participants' coping responses. This external factor may have influenced the present study, as organisational restructuring was occurring in both the private organisation and the government department. This may have offered a partial explanation as to the types of coping styles used by participants. Callan (1993) suggested that work related stressors are likely to elicit problem-focused coping. The use of emotion-focused coping is possibly increased during periods of organisational change. Degree of controllability may account for the differences in chosen coping styles.

The adaptability of a person to his or her environment seems a logical area for investigation. Although interesting, some studies question its usefulness, as the root causes of stress are often far removed from the individual or the job (Brief & Atieh, 1987). Handy (1988) suggested that stress and burnout literature limits investigation towards the individual and "... neglects the relationship between higher order organisational and societal issues" (p. 355). The problem, and hence blame, seems to be limited to the individual -- not the system in which he or she exists.

In conclusion, the identification of sources of work stressors, inefficient coping styles, their interrelationship, and compounding effects may assist in improving the physical and mental well-being of employees. Suitable attention to the development of social resources may assist in improving the employee's occupational well-being. Coping styles used at work may be linked to the perceived level of controllability within the worker's environment. Assisting participants' mastery over task problems (i.e., role ambiguity, role conflict and role overload) may also improve well-being.

Employee involvement in the creation of job requirements, tempered with an understanding of the influence of positional power of supervisory positions, may assist organisations in improving the psychological and physical well-being of employees.

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Appendix A

(Survey on Coping with Work Role Pressures)

SURVEY ON COPING WITH WORK ROLE PRESSURES

Prepared by Wayne Hill

March 1995

YOUR ASSISTANCE WOULD BE APPRECIATED

The following questionnaire is being used to obtain information on how workers cope with role pressures they may experience at work. The questionnaire should take no more than 10 minutes of your time.

All data collected will be private and confidential. Individual questionnaire results will only be viewed by myself and my Honours Supervisor. All records gathered will be destroyed on completion of the project.

A summary of the results will be made available to participants who request them (Please refer to "Letter of Informed Consent").

If you have further questions and would like to contact me at a later time my home phone number is [REDACTED]

Yours sincerely

Wayne Hill

Basic demographic details

[This section will assist in describing the sample of participants in the study.]

Gender: (please circle) Male / Female

Age: _____

Organisation: _____

Occupation: _____

Length of time in current position: _____

How you assess the effects of your job

This questionnaire focuses on feelings and how they are affected by the pressure you perceive in your job. The questions assume that you can assess your health with a fair degree of accuracy and also that you will be honest in your responses.

Please answer by circling your position on each answering scale. *Consider the question with reference to how you have felt over the last three weeks.*

strongly agree	6
agree	5
slightly agree	4
slightly disagree	3
disagree	2
strongly disagree	1

1.	I feel emotionally drained from my work.	6	5	4	3	2	1
2.	I feel fatigued when I have to get up in the morning to face another day on the job.	6	5	4	3	2	1
3.	Working with people all day is really a strain for me.	6	5	4	3	2	1
4.	I feel "burned out" from my work.	6	5	4	3	2	1
5.	I feel frustrated by my job.	6	5	4	3	2	1
6.	I feel I'm working too hard on my job.	6	5	4	3	2	1
7.	Working directly with people puts too much stress on me.	6	5	4	3	2	1
8.	I feel like I'm at the end of my rope.	6	5	4	3	2	1
9.	I feel used up at the end of the day.	6	5	4	3	2	1

Your physical health

[Examines the list and indicate the frequency of occurrence of these ailments.]

Please answer by circling your answer on the scale shown:

very frequently	6
frequently	5
sometimes	4
infrequently	3
very infrequently	2
never	1

1.	An inability to get to sleep or stay asleep.	6	5	4	3	2	1
2.	Headaches and pains in my head.	6	5	4	3	2	1
3.	Indigestion or sickness.	6	5	4	3	2	1
4.	Feeling unaccountably tired or exhausted.	6	5	4	3	2	1
5.	Tendency to eat, drink or smoke more than usual.	6	5	4	3	2	1
6.	Decrease in sexual interest.	6	5	4	3	2	1
7.	Shortness of breath or feeling dizzy.	6	5	4	3	2	1
8.	Decrease in appetite.	6	5	4	3	2	1
9.	Muscle trembling (e.g., eye twitching).	6	5	4	3	2	1
10.	Prickly sensations or twinges in parts of my body.	6	5	4	3	2	1
11.	Feeling as though I do not want to get up in the morning.	6	5	4	3	2	1
12.	Tendency to sweat or a feeling of my heart beating hard.	6	5	4	3	2	1

Pressures in your job role

Aspects of a person's role within an organisation have been recognised as a major source of pressure in their work life. The objective of this questionnaire is to determine what aspects of your work role are substantial sources of pressure.

Please answer by circling your position on each answering scale. *Consider the questions with reference to events over the last three weeks.*

strongly agree	7
agree	6
slightly agree	5
neither disagree nor agree	4
slightly disagree	3
disagree	2
strongly disagree	1

1.	I am given enough time to do what is expected of me on my job.	7	6	5	4	3	2	1
2.	I feel certain about how much authority I have.	7	6	5	4	3	2	1
3.	I am given clear, planned goals and objectives for my job.	7	6	5	4	3	2	1
4.	I have to do things that should be done differently.	7	6	5	4	3	2	1
5.	I know that I have divided my time properly.	7	6	5	4	3	2	1
6.	I receive an assignment without the manpower to complete it.	7	6	5	4	3	2	1
7.	I know what my responsibilities are.	7	6	5	4	3	2	1
8.	I have to break a rule or policy in order to carry out an assignment.	7	6	5	4	3	2	1
9.	It often seems like I have too much work for one person to do.	7	6	5	4	3	2	1
10.	I work with two or more groups that operate quite differently.	7	6	5	4	3	2	1
11.	I know exactly what is expected of me.	7	6	5	4	3	2	1
12.	I receive incompatible requirements from two or more people.	7	6	5	4	3	2	1
13.	I do things that are apt to be accepted by one person and not accepted by others.	7	6	5	4	3	2	1
14.	The performance standards on my job are too high.	7	6	5	4	3	2	1
15.	I receive an assignment without adequate resources and material to execute it.	7	6	5	4	3	2	1
16.	Explanation of what has to be done is clear.	7	6	5	4	3	2	1
17.	I work on unnecessary things.	7	6	5	4	3	2	1

How you cope with stress you experience

Whilst there are variations in the way individuals react to sources of pressure, in general we all make some attempt at coping with these difficulties - consciously or subconsciously.

This questionnaire lists a number of coping behaviours that you are to rate in terms of usage. *Consider the question with reference to how you coped with the main sources of work pressure in the last three weeks.*

		Used very much				Did not use at all		
		7					1	
1.	I tried to change the situation to get what I wanted.	7	6	5	4	3	2	1
2.	I made an effort to change my expectations.	7	6	5	4	3	2	1
3.	I tried to convince myself that the problems were not very important after all.	7	6	5	4	3	2	1
4.	I tried to keep from thinking about the problems.	7	6	5	4	3	2	1
5.	I focused my efforts on changing the situations.	7	6	5	4	3	2	1
6.	I tried to convince myself that the way things were was, in fact, acceptable.	7	6	5	4	3	2	1
7.	I told myself the problems were unimportant.	7	6	5	4	3	2	1
8.	I tried to turn my attention away from the problems.	7	6	5	4	3	2	1
9.	I tried to relieve my tension somehow.	7	6	5	4	3	2	1
10.	I worked on changing the situation to get what I wanted.	7	6	5	4	3	2	1
11.	I tried to adjust expectations to meet the situation.	7	6	5	4	3	2	1
12.	I told myself the problems weren't so serious after all.	7	6	5	4	3	2	1
13.	I refused to think about the situations.	7	6	5	4	3	2	1
14.	I tried to get them off my chest.	7	6	5	4	3	2	1
15.	I tried to fix what was wrong with the situations.	7	6	5	4	3	2	1
16.	I tried to adjust my own standards.	7	6	5	4	3	2	1
17.	I told myself the problems weren't a big deal after all.	7	6	5	4	3	2	1
18.	I tried to avoid thinking about the problems.	7	6	5	4	3	2	1
19.	I just tried to relax.	7	6	5	4	3	2	1
20.	I tried to just let off steam.	7	6	5	4	3	2	1

Who you can depend on

People may have others that aid them in dealing with work pressures. The object of this questionnaire is to examine the role of significant others in your work life.

1. How much can each of these people be relied on when *things get tough*?

	Not at all	A little	Some-what	Very much
a. Your immediate supervisor (boss)	0	1	2	3
b. Other people at work	0	1	2	3
c. Your wife, husband or defacto	0	1	2	3
d. Your friends and relatives	0	1	2	3

No such relationsh

2. How much is each of the following people *willing to listen to your work-related problems*?

	Not at all	A little	Some-what	Very much
a. Your immediate supervisor (boss)	0	1	2	3
b. Other people at work	0	1	2	3
c. Your wife, husband or defacto	0	1	2	3
d. Your friends and relatives	0	1	2	3

No such relationsh

3. How much is each of the following people *helpful to you in getting your job done*?

	Not at all	A little	Some-what	Very much
a. Your immediate supervisor	0	1	2	3
b. Other people at work	0	1	2	3

4. Please indicate *how true* each of the following statements is of your immediate supervisor.

	Not at all true	Not too true	Some-what true	Very true
a. My supervisor is <i>competent</i> in doing (his/her) job.	0	1	2	3
b. My supervisor is very <i>concerned</i> about the welfare of those under him/ her.	0	1	2	3
c. My supervisor goes out of his/her way to <i>praise</i> good work.	0	1	2	3

Letter of Informed Consent

I (Mr / Ms / Mrs / Miss)

(first name)

(surname)

am a willing participant in the research project undertaken by Wayne Hill that will examine work role pressures and how people cope with them.

I understand I have the right to withdraw my consent in participating in this investigation at any time during the investigation.

Signed: _____ Date: _____

Organisation: _____

Occupation: _____

Please tick if you wish to be provided with a copy of the results ☐

Appendix B

(Ethics Review Checklist)

Ethics Review Checklist

- | | |
|--|--------|
| 1. Is the study scientifically sound and of value to society | YES no |
| 2. Will the subjects be informed-prior to their actual involvement in the collection of data - of all feature of the research that reasonably might be expected to influence willingness to participate | YES no |
| 3. Will the subjects be told that they can discontinue their participation at any time? | YES no |
| 4. Does the study involve concealment and/or deception of the subject? | yes NO |
| 5. Will deception be used in order to obtain agreement to participate? | yes NO |
| 6. Will it be clear to the participants in you study that they are subjects of investigation? | YES no |
| 7. Will information on you subjects be obtained from third parties? | yes NO |
| 8. Is any coercion exerted upon subjects to participate? | yes NO |
| 9. Is confidentiality of the subject's identity positively guaranteed | YES no |
| 10. In case there is a possibility that a subjects identity can be deducted by anyone other than the experimenter, is the participant's right to withdraw his/her data respected | YES no |
| 11. Will the researcher fulfil all his/her promises to the subject? | YES no |
| 12. Does the study involve physical stress (or the possibility of the subject's expectation thereof: examples fatigue, pain, sleep loss, deprivation of food and drink, drugs, alcohol)? | yes NO |
| 13. Does the study involve the indication of mental discomfort to the subject (examples: fear, anxiety loss of self esteem, shame, guilt embarrassment, becoming aware of personal weaknesses)? | yes NO |
| 14. Does het study involve subjects who are legally or otherwise not in a position to give their valid consent to participation (example: children, prison inmate, metal patients)? | yes NO |
| 15. Is information obtained on individual subjects disclosed to third parties? | yes NO |
| 16. Could publication of the research results possibly interfere with strict confidentiality? | yes NO |
| 17. Could publication of results possibly harm the subject-either directly or through identification with his/her membership group? | yes NO |
| 18. Are there any other aspects of this study that may interfere with the protection of the well-being and dignity of the subject? | yes NO |
| 19. Will the experimenter make all efforts to ensure a normal human relationship between the subject(s) and experimenter after the collection of data has been terminated? | yes NO |
| 20. In cases in which a subject is dissatisfied or complains about the research procedures, will the experimenter expluin to the subjects(s) that they may express their feelings to the Head of the Department? | YES no |
| 21. Is the importance of the objective of the study in proportion to the inherent risk to the subjects? | YES no |
| 22. Is there any hazard to the safety of the research personnel (professors, students, research staff, etc.)? | yes NO |

Roberts, G. A., & Brke, S. O. (1989). Nursing research: A quantitative and qualitative approach. Boston: Jones & Bartlett.