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SUPERVISOR SOCIAL SUPPORT AS A MODERATOR OF STRESS-STRAIN RELATIONSHIPS

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Degree awarded with distinction 9 December 1992

Dissertation submitted to the Faculty of Arts,

University of the Witwatersrand,

for the degree of Master of Arts.

Johannesburg 1992

DECLARATION

I hereby declare that this dissertation is my own unaided work. I have not submitted it for the degree of Master of Arts to any other university.

C. Bernstein

For My Son, David Lynton

ACKNOWLEDGEMENTS

I sincerely thank my supervisors
Mrs Helen Mastrantonis and Mrs Debbie Kruger
for their invaluable patience, support and guidance.

I gratefully thank Mr Kevin Wessels and
Mr Naas Marais for providing me with access to
the organisations that participated
in the present research.

I lovingly thank my parents and my husband
for their endless encouragement.

Financial assistance from the Human Sciences Research Council is hereby gratefully acknowledged. Opinions expressed or conclusions drawn are not to be regarded as those held by the Human Sciences Research Council.

ABSTRACT

The aim of the present research was to expand upon the understanding of the social support process by examining the concept within a specific multi-variate framework. This entailed the development of a new reliable and valid measurement tool which could distinguish between four different social support dimensions, namely, emotional social support, appraisal social support, informational social support and instrumental social support. Once this measure was developed and validated it was used to assess the differential impact of specific types of support on specific stressors and strains, within an organisational setting. That is, it was used to assess the impact of the four different types of support in the relationship between stressor variables of role ambiguity, role conflict and role overload and outcome variables of job satisfaction, propensity to leave one's job, self-esteem and psychological well-being. This impact could occur through two effects. The first being the main effect which states that stress and support have an effect on strains or outcome variables independent of one another. The second being the moderator effect which proposes that support can moderate, that is, attenuate the impact of stress on strain. Two procedures were applied with regard to analysing data. Firstly, the dimensionality of the measure was assessed through the use of a factor analytic strategy, such a strategy revealing that the measure did indeed comprise of the four proposed dimensions of social support. However, this analysis did reveal that one dimension, namely that of emotional support, was dominant, this particular type underpinning the other three dimensions to a lesser or greater degree. Secondly, the statistical procedure of moderated multiple regression was used to determine the existence and the nature of the two effects of social support, namely, the main and moderator effects of the proposed four types of support in the relationship between role ambiguity, conflict and overload and job satisfaction, propensity to leave one's job, self-esteem and psychological well-being. However support was demonstrated for the main effect hypotheses only. That is, all the proposed types of support were found to have a main effect on the proposed dependent variables. In addition all the proposed role stressors demonstrated a main effect on the dependent variables. There was, however, one exception, namely that of no main effect of role overload on propensity to leave one's job. With regard to moderator effects, none were observed in the present study. That is, none of the proposed social support types were found to moderate the relationship between any of the proposed role stressors and any of the outcome variables. A discussion of these findings, the limitations and theoretical and practical implications of the present research are noted. In addition the advances made by the present research towards a greater understanding of the social support concept are acknowledged. Furthermore, recommendations for future research on stress, social support and strain are elaborated on.

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CHAPTER ONE
INTRODUCTION

Stress in organisations has become a rapidly growing concern to both organisational researchers and management practitioners because of its relationship to a magnitude of costly individual and organisational symptoms (Schuler, 1980; 1982). A vast amount of research has examined the relationship of organisational stress and individual strain, proposing ways in which such stress can be minimised or ways in which the effects of such stress on organisational and individual strain can be attenuated (Schaubroeck, Cotton and Jennings, 1989). Research on means to minimise stress or attenuate its impact on strain have centred on the beneficial effects of social support on stress and health (Sarason and Sarason, 1989).

Social support has been described in the literature as an external resource capable of reducing the negative impact of stress on strain and/or improving health and well-being in the absence of the experience of stress. Research on the social support concept has been carried out across a vast breadth of disciplines and in a variety of different contexts. Research findings have, by and large, demonstrated the positive effect of social support on health along with its ability to reduce the negative impact of experienced stress on strain.

However, the research literature on social support has been plagued with controversy, due to the equivocal nature of research findings. Although much of the research has demonstrated the positive effect of support on stress and health there have been many researchers who have found support to have no effect on stress, strain, and/or no effect in the relationship between stress and strain. In some instances, reverse effects have been demonstrated, that is, social support has been shown to have a negative impact on stress and health (O'Reilly, 1988; Tardy, 1985).

These equivocal research findings have been attributed to a number of methodological and theoretical problems identified in the social support literature. These pertain to the lack of conceptual clarity with regard to defining the social support construct, inadequate measurement techniques, and a lack of specificity with regard to matching up the right types of support with specific stress-strain situations (Cohen and Wills, 1985; Payne and Jones, 1987; Tardy, 1985).

Consequently, the present study's objective is 1) to assess the ability of social support to reduce the negative impact of organisational stress on strain, and 2) to assess its ability to have a beneficial effect on health independent of the experience of stress. These two

objectives incorporate the assessment of the main and moderator effects of social support. The main effect states that support will have a uniform effect on outcomes *regardless* of the nature or degree of stress experienced. In addition the main effect states that stress will have an effect on strain, independent of the amount of support available. The moderator effect states that the nature of the relationship between stress and strain is *dependent* on the degree of social support received.

However, before these effects can be assessed the present study needs to identify methodological and theoretical problems in the literature on stress and social support and propose means whereby these problems can be addressed. Three main problem areas within the social support literature have been identified. The first pertains to the lack of conceptual clarity and consistency with regard to the way in which the social support concept is defined. A number of researchers have noted that, by and large, most of the definitions of social support outlined in literature are characterised by a great degree of conceptual ambiguity (O' Reilly, 1988; Shumaker and Brownell, 1984; Tardy, 1985).

The second problem pertains to i) the lack of specificity with regard to the identification of the different types of social support that constitute the overall support construct and ii) the lack of specificity with regard to which types of support from which source of support would be most beneficial in specific situations of stress and strain. A number of researchers have proposed that equivocal research findings can be attributed to a lack of specificity where global measures of social support are used to assess the relationship of social support to stress and health. They propose that one must develop measures that distinguish between *different types* and *different sources* of support and that one must *match* up these different types and sources of support to specific situations of stress and strain. The argument is thus that social support will only demonstrate a positive effect in the relationship between stress and health if the right types of support from the most appropriate source are matched to requirements of a specific stress-strain situation (Cohen and Mackay, 1984).

Related to both of these two problems, is the lack of adequate social support measurement tools that can assess the different types of social support. As mentioned, most of the available social support measures are global in nature. That is, they are unidimensional measures of support and therefore, do not distinguish between the different types of social support. As such they are unable to meet with the requirements of specificity which calls for the assessment of social support as a multidimensional construct.

In order to address these problems the present study thus needs to 1) establish a clear conceptualisation of social support, 2) determine which types of support from which source will best meet the coping requirements of the specific stress-strain situations selected for study, and 3) develop a reliable and valid measure of social support, capable of assessing the different types of support proposed in the present study. To accomplish this the present study will be conducted across two phases. Within the first phase a clear conceptualisation of social support will be defined. In addition, hypotheses will be formulated as to which types of support from which source will be best matched to specifically selected situations of stress and strain. Furthermore, within this phase, a specific multidimensional measure of social support will be developed. Within the second phase the utility of this measure will be assessed in terms of its ability to ascertain whether the specific types of support proposed do have specific, more beneficial effects in the specifically selected stress-strain situations.

Thus Chapters two and three examine the stress literature, evaluating models of stress and their applicability to the study of organisational stress. In addition, the review of the stress literature enables a selection of the stress-strain relationships to be assessed in the present study. Chapter four focuses on the social support literature with a view to identifying research problems and the means whereby these problems can be addressed. As mentioned, three main research problems are focused upon, namely, problems of conceptualisation, problems of lack of specificity in social support research, and problems pertaining to social support measurement.

In Chapter five, which constitutes phase one of the present research, these three problems are addressed. Thus a clear conceptualisation of social support is proposed, and specific hypotheses are formulated. Three hypotheses are presented. *The first hypotheses* proposes that emotional and appraisal supervisor social support will moderate the relationship between role ambiguity and role conflict and self-esteem and psychological well-being. In addition, it is hypothesised that these two role stressors will have a direct effect on self-esteem and psychological well-being and that emotional and appraisal support will have a direct effect on self-esteem and psychological well-being. *The second hypothesis* proposes that informational supervisor social support will moderate the relationship between ambiguity and conflict and propensity to leave one's job and job satisfaction. This hypothesis also proposes that role ambiguity and conflict and informational support will have direct effects on these two dependent variables. *The third hypothesis* proposes that instrumental support will moderate the relationship between work overload and psychological well-being, propensity to leave one's job and job satisfaction. It is also proposed that work overload and instrumental support will have direct effects on these three dependent variables.

In addition, Chapter five details the development of a specific multidimensional measure of four factors of supervisor social support. Theoretical and methodological steps required in order to develop a reliable and valid measurement tool are outlined. Moreover, the specific procedures adopted in this regard are described. These are a *literature search*, a *pilot study*, and *statistical validation testing*. Results and a discussion of findings are then presented. Thereafter, Chapter five concludes with the limitations and theoretical and practical implications of phase one. In addition the advances represented by phase one are discussed.

In Chapter six, which constitutes phase two of the present research the hypotheses are assessed. Methods of assessment are outlined, followed by a presentation of results and a discussion of findings. As with Chapter five, this chapter concludes with the limitations and theoretical and practical implications of the second phase of the present research. The advances represented by this phase with respect to enhancing the understanding of the social support phenomenon are also presented.

CHAPTER TWO
GENERAL APPROACHES TO STRESS

In the past three decades there has been a tremendous interest in and empirical research on the impact of psychological stress on health (Barling, 1990; Barling and Pratt, 1988; Haines, Hurlbert and Zimmer, 1991). During this period, the research literature pertaining to stress and illness has proliferated (Haines, Hurlbert and Zimmer, 1991; Monat and Lazarus, 1977; Ross, Altmaier and Russel, 1989). Yet despite its current prominence among scientific issues of popular interest, research in this field has been plagued with controversy (Cooper, 1983). This controversy has arisen due to the lack of a unifying definition or conceptualisation of stress used by researchers as well as to the simplistic nature of some of the stress approaches used (Bailey and Bhagat, 1987; Chalmers, 1981).

In order to examine the nature of this controversy further, a review of these past approaches to stress needs to be undertaken. The aim of this review will be to examine early approaches to stress with regard to identifying both the weaknesses and the strengths within each approach. The review will also attempt to outline how the more recent theories of stress evolved out of the earlier approaches. Two basic traditions, both of which have made important contributions to the understanding of stress, will be examined - namely, the Biological or Physiological Tradition and the Psychosocial or Psychological Tradition (Fleming, Baum and Singer, 1984).

THE BIOLOGICAL APPROACH TO STRESS

The modern roots of the biological stress tradition began with Cannon's (1936) and Selye's (1936) work on emotional stress. Both defined stress as an orchestrated defence operated by physiological systems designed to protect the body from environmental challenges to bodily process (Fleming, Baum and Singer, 1984; Hobfoll, 1989; Singer and Davidson, 1986).

According to Cannon (1936) an organism would respond to stress, that is, an outside threat, with an "emergency response". Such a response would be adaptive in that it would prepare the organism to cope with "danger". Recognition of such danger would be followed by adrenal gland activity and sympathetic arousal that increased heart rate, respiration and skeletal muscle tone while reducing blood flow to the skin and viscera (Fleming *et al.*, 1984). This heightened state of arousal would then better enable the individual to fight or flee from the "danger". Selye's (1936) defined stress as the *non-specific* response of the body to any demand made upon it. He believed that the physiological stress response did not depend on

the nature of the stressor and not, within reason, on the species in which it was evoked.

The response syndrome represented a *universal* pattern of defence reactions serving to protect the person or animal and his/her/its integrity (Cox, 1978). Selye (1936) proposed that bodily stress reactions follow a three stage General Adaption Syndrome (GAS).

The first stage was that of alarm reaction where the body demonstrated physiological changes characteristic of initial exposure to the stressor such as pupil dilation, heart rate increase and galvanic skin response increase (Chalmers, 1981, Cox, 1978). *The second stage* was that of resistance which occurred if the stress persisted. Here alarm reactions disappeared to be replaced by changes which marked the individual's adaptation to the situation. *The third stage* was that of exhaustion which occurred if the individual was unable to resist or adapt to the persisting stressor or stressors. At this stage the body's immune system would begin to break down and "diseases of adaptation" such as heart disease, gastro-intestinal disorders, anxiety and depression could become evident (Chalmers, 1981; Cox, 1978).

According to Selye (1936) the effects of stress were cumulative; the effects of later stress responses being added on to the effects of earlier/past stress responses. This occurred because responses to *different* threats were *all the same*, that is, *non-specific* and therefore an individual's reaction to a threat would be augmented by his/her previous exposure and reaction to any other threats. The model thus implied that the individual was purely reactive - responding to any and all stressors with a unitary, all-or-none stress response (Appleby and Trumbull, 1986).

THE PSYCHOLOGICAL APPROACH TO STRESS

During the 1940's and 1950's, researchers examining the effect of stress on performance within the military discovered that performance was not *uniformly* impaired in response to a set condition of stressors, as the physiological tradition had implied (Lazarus and Folkman, 1984). These studies made it clear that one could not simply predict a stress outcome by reference to a stressful stimuli. To do so would require that attention be paid to the psychological processes that created individual differences in reaction (Lazarus and Folkman, 1984). Individuals could no longer be seen as responding to all stressors in a unitary and automatic "black box" fashion. Rather it appeared that what was important in determining the extent, intensity, direction and/or duration of effect that a stressor could have on an individual was the way in which the individual "*appraised*" the stressor (Appleby and Trumbull, 1986).

Within this tradition stress was defined as the outcome of interactions between the individual

and the environment (Singer and Davidson, 1986). That is, the relationship between the person and the environment that is *appraised* by the person as taxing or exceeding his/her resources and endangering his/her well-being (Lazarus and Folkman, 1984). Key elements of this psychosocial tradition were thus appraisal as well as the notion of coping.

Appraisal was defined as the cognitive, evaluative process that determines why and to what extent a particular transaction or series of transactions between the person and the environment is stressful.

Coping was defined as the process through which the individual manages the demands of the person-environment transaction that are appraised as being stressful, as well as the emotion that this transaction generates (Lazarus and Folkman, 1984). The extent to which the individual appraised a situation as being stressful as well as the extent to which he/she was able to cope was a function of what was referred to as individual differences or individual susceptibility (Kaufmann and Beehr, 1991). Both individual differences and individual susceptibility were affected by the type of personality of the individual concerned (Singer and Davidson, 1986)

THE TRANSACTIONAL MODEL OF STRESS

This approach was encapsulated in the Transactional Model of Stress (Cox and Mackay, 1980). Within this model five stages could be identified (See Figure 2.1).

At the *first stage*, referred to as the demand stage, a distinction was made between actual demand and perceived demand. **Actual demand** referred to an *objective* measurement of the environmental force or stressor acting upon the individual. **Perceived demand** referred to the *subjective* perception of the actual demand, in terms of how threatening the demand was believed to be by the individual who was actually exposed to it. In addition, the first stage included a dimension of capability. Here the model distinguished between **actual capability** and **perceived capability**. Actual capability referred to the actual ability of the individual to cope with, respond or adapt to, and/or circumvent the demands placed upon him or her. Perceived capability referred to the extent to which the individual believed that he/she could actually do this.

At the *second stage*, the cognitive appraisal described in the first stage was taken a step further. Here the individual would match up what he/she perceived the demand to be with his/her perceptions of his/her capability to deal with it. If the individual felt his or her capability to be insufficient in terms of dealing with the perceived demand, that is, if an *imbalance*

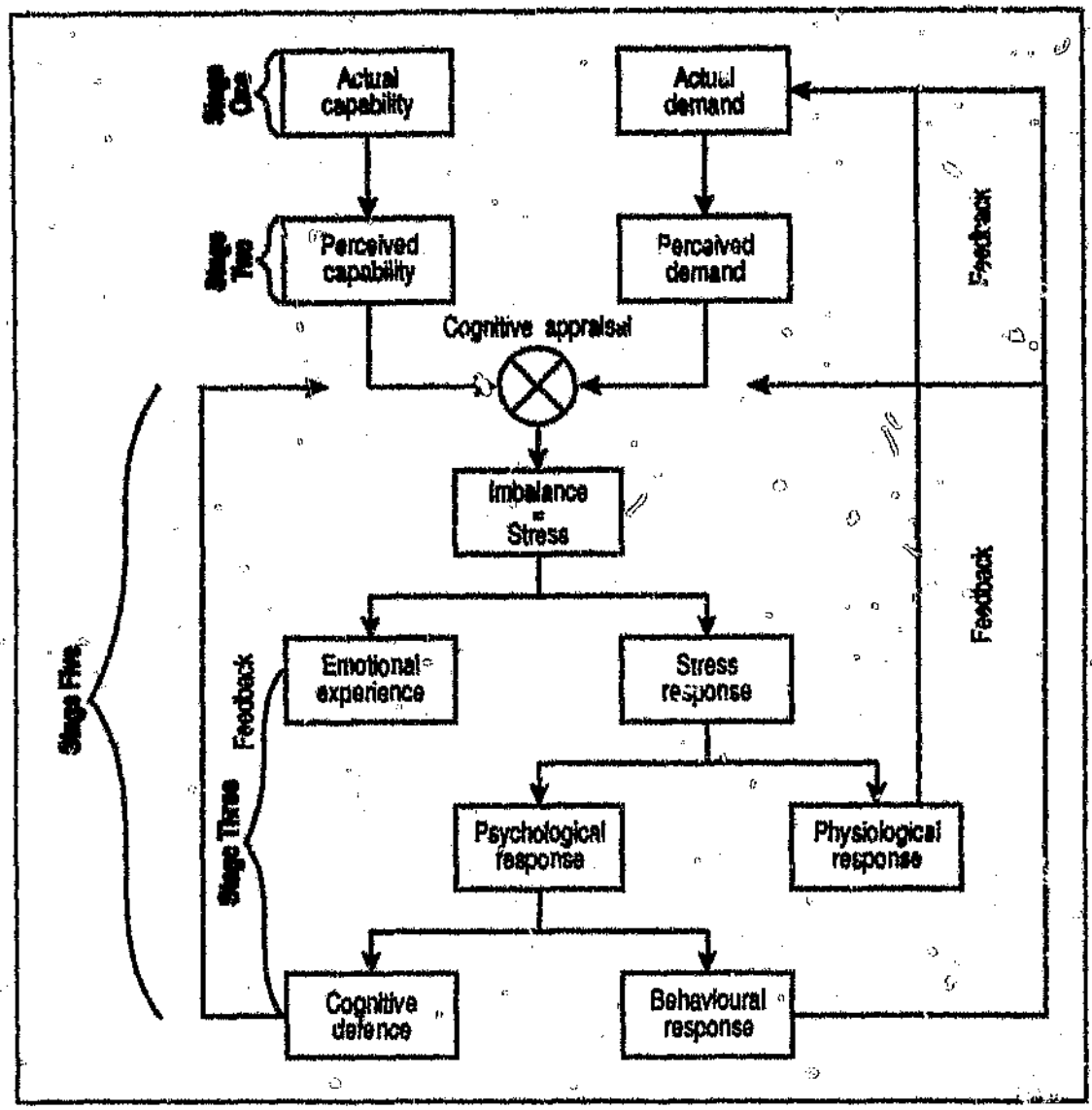

FIGURE 2.1 The Transactional Model (Adapted from Cox and Mackay, 1980).

between perceived demand and perceived capability was believed to exist, then the individual would experience stress (Cox and Mackay, 1980). Cox and Mackay (1980) referred to this experience of stress as a 'subjective emotional experience' which was accompanied by a physiological and/or psychological stress response. The psychological response was made up of cognitive and/or behavioural attempts to reduce the stressful nature of the demand. Cox and Mackay (1980) regarded these responses to stress as 'methods of coping' and it is these responses that constituted the *third stage* of the model.

Following the responses to stress, (i.e. the third stage), were the consequences of such responses. These consequences formed the *fourth stage* of the model and were shaped by a number of factors, namely, the extent of the actual demand, the extent to which the individual appraised of the demand as threatening and the perceived ability of the individual

to successfully cope with/respond to the appraised stressor. Thus, the individual would evaluate the extent to which he/she had been successful or unsuccessful in responding to or coping with a demand situation that was perceived to be threatening. Whether the individual perceived the consequences of coping responses to be a success or failure, would then determine whether perceived stressors would have a negative impact upon the individual in terms of strains.

This fourth stage was not, however, diagrammatically represented in Cox and Mackay's (1980) model. Chalmers (1981) suggested the formal inclusion of such a stage within the diagrammatic representation (See Figure 2.2) and divided the evaluation of consequences into **actual consequences** and **perceived evaluation of consequences.** The emphasis was, however, placed by Chalmers (1981), on the perceived consequences. According to Chalmers (1981), if the perceived consequences of one's actions (i.e. one's responses to stress) were seen as meeting the perceived demands of the situation, then the experience of stress would be relieved.

If, however, the perceived consequences of one's actions were seen as having been inadequate to meet the perceived demands of a situation, then stress would not be relieved. In such an instance there could be a continuation of the existing stress or, perhaps, a commencement of a new, slightly modified, stress sequence. In turn, this continued stress experience could lead to the experience of strain in the individual concerned.

The effect that these consequences could have could also be seen to occur through the *fifth stage* which is that of the **Feedback Loop.** Feedback could occur at all stages in the stress process and could be instrumental in shaping the outcome at each stage of the process (Cox, 1978). Feedback could be either positive or negative (Chalmers, 1981; Cox and Mackay, 1980). For example, at the stage of responses/methods of coping, if the individual perceived his or her coping or responses to the stressful demand to be successful this could feed back into the stress process enabling him or her to see the demand in less threatening light than previously. As mentioned above, perception of successful coping could also relieve the experience of stress, the individual no longer perceiving the demand situation to be threatening. Successful coping could also enhance confidence and the belief in one's capability to deal with the same or similar demands if and when they re-occur.

Conversely, responses or coping that are perceived to be unsuccessful could prolong or increase the experience of stress, reducing one's belief in his or her capability to deal with it or it could lead to the commencement of a new stress sequence (Chalmers, 1981). At this

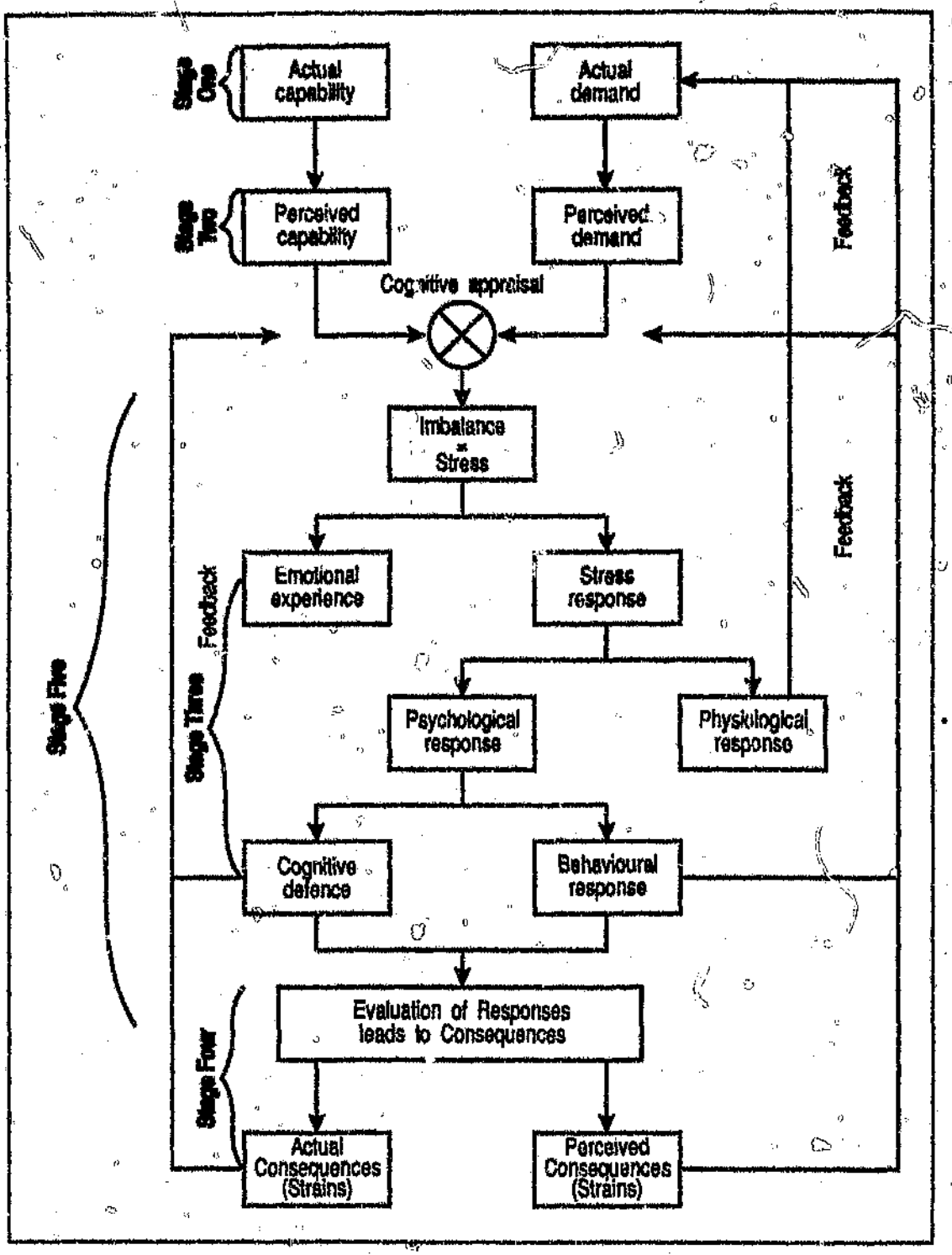

FIGURE 2.2 The Transactional Model (Adapted from Cox and Mackay, 1980; Chalmers, 1981).

point, when the individual perceives him/herself as being unable to deal with the stressor, consequences may become manifest in the form of actual psychological, physiological and/or behavioral symptoms of ill-health (Chalmers, 1981; Cox and Mackay, 1980). At a psychological level, depression and anxiety may result. Physiologically, consequences can manifest in the form of heart disease and ulcers. At a behavioural level, poor consequences

can result in increased forms of negative behaviour, e.g. alcohol consumption and drug abuse.

SUMMARY/CONCLUSION

As can be seen from the above descriptions of physiological and psychological stress approaches, the latter offered a far more complete and sophisticated understanding of stress than that proposed by Cannon (1936) and Selye's (1936) simplistic models. By bringing into play the full panapoly of human cognitive activities the psychosocial model enabled stress researchers to understand and explain the differing stress response patterns that were difficult to comprehend using biological models. However, even though this model did represent a great advance it was not without limitations (Singer and David, 1986). These limitations need to be identified and resolved as without a clear theoretical backdrop it is difficult to create a true body of knowledge because there are no defined borders of theory to be challenged (Hobfoll, 1989). Consequently, the following section will be devoted to outlining conceptual limitations within the Transactional Model. Suggestions will also be offered as to how these limitations can be resolved, with special reference being made to those aspects that are to be the focus of the present research.

LIMITATIONS OF THE TRANSACTIONAL MODEL

There are a number of limitations of the transactional model.

The first limitation pertains to the distinctions that the model makes between actual demand, capability and consequences and perceived demand, capability and consequences. According to Lazarus *et al.*, (1984) this distinction may be an erroneous one as the reality or actuality of a demand situation and one's capability to cope successfully with it, is defined exclusively on the basis of the individual's perception.

However, there are instances which may require the retention of the actual dimension. For example, there may be a situation in which a researcher wishes to set a specific level of stress so that all subjects exposed to the stressor are subjected to identical levels of it. In such an instance there would be value in retaining the 'actual demand' dimension as it would enable a determination of differing response patterns on the part of a group of individuals to the researcher's objectively and externally defined, specific demand situation. Inclusion of the actual dimension in this instance allows for the adoption of a "normative" view of stress (Elliot and Eisdorfer, 1982). Within this view of stress, events are categorised on the basis of whether they would 'normally' lead to a stress reaction. An example of a normative stress event is that of bereavement which would 'normally' lead to a stress reaction in the individual experiencing the loss (Parkes, 1970).

Hobfoll (1989) suggests that this normative view of stress is required as it provides a starting point for researchers. It enables the identification of those events that are most likely to lead to stress responses in individuals exposed to them. He argues that while perceptions may be important determinants of what is stressful to the individual concerned, such perceptions are far from being entirely idiographic in that there is broad agreement as to what is stressful to most individuals (Dohrenwend, Dohrenwend, Dodson and Shrout 1984; Holmes and Rahe, 1967). Hobfoll (1989), thus proposes that one has to initially adopt a normative view of stress when conducting research, as, only by creating a taxonomy of stressful events can we set an anchor point whereby the differences in how individuals appraise and respond to stress can be compared. Such an approach also enables researchers to further categorise events according to the range of appraisals and responses that they give rise to (Cutrona and Russel, 1989; Barling, 1990). The adoption of this approach in which normative events are selected and then evaluated in terms of individual appraisal and response to such events is referred to as an Event-Perception Approach.

Retention of the actual dimension is also required when the stressor being studied is a physiological stressor. There is considerable debate on the extent to which a person can have cognitive mediation of a physiological stressor with regard to (1) the demand it places upon the individual and, (2) the consequences that such a demand may ultimately lead to.

According to Singer and Davidson (1986), the extent to which physiological and neuro-endocrine concomitants can be influenced by or determined by cognition, is in certain situations, questionable. Some physiological stressors are so noxious, invasive or even lethal that they would result in strain in the form of actual tissue damage or damage to the psyche for all individuals exposed to them, irrespective of cognitive mediation. For example, exposure to radiation, chemical warfare and natural disasters (Lazarus and Folkman, 1984; Singer and Davidson, 1986).

The transactional model can also be criticised for its less than complete discussion of inter- and extra-organismic variables that effect the stress process. While these variables are mentioned, their operation within the stress process is not fully described. Furthermore, this process of operation is not included as a stage within the model. The crux of the model's explanation for differing response patterns is explained under the general rubric of individual differences or 'vulnerability factors' (Ganster and Victor, 1988). However, it does not offer a full enough explanation as to what these individual differences are, nor does it fully explain *how* these individual differences make one more or less susceptible to perceiving a demand to be threatening and/or more or less susceptible to stress. Before suggesting a point within

the model where these variables can be formally included, a description of these variables will follow below.

Inter-organismic variables refer to personality or individual difference variables that can affect the way an individual perceives a stressful situation (Chalmers, 1981; Nowack, 1991). Personality variables most noted in the literature for their ability to effect how well or how poorly an individual deals with stress are those of Personality Hardiness, Type A vs Type B personality, Self-Esteem and Locus of Control (Ivancevich and Matteson, 1980; Ganster, Fusilier and Mayes, 1986; Garber and Seligman, 1980, Greene and Nowack, 1991; Kobasa, 1979; Friedman and Rosenman, 1974; Lefcourt 1980, Nowack, 1990; 1991).

Extra-organismic variables are those variables operating external to the individual that can also alter individual perception of a demand situation and the extent to which an individual copes with a demand situation that is perceived to be stressful. Cultural differences, circumstantial differences in which the stressor actually occurs, differences in socio-economic status, educational differences, past experience, and the extent to which coping resources such as social support are available to the individual, are all examples or extra-organismic variables that can affect the stress process (Antonnuci, Fuhrer and Jackson, 1990; Dohrenwend and Dohrenwend, 1978; George, 1980; Kaplan, 1983; Kessler and Cleary, 1978; Monaghan, 1983.

With regard to cultural differences certain so called stressful situations may be regarded as less or more stressful or not stressful at all depending on the culture in which they occur. Likewise what is regarded as stressful in some societies or some classes of society may not even be a consideration in others (Kaplan, 1983; House, Umberson and Landis, 1988).

Circumstantial differences in which the stressor occurs can also serve to reduce or increase the extent to which a potential stressor is perceived of as stressful (Cutrona and Russel, 1989; Cutrona, 1990; Kaplan, 1983). Examples of circumstantial differences are **predictability** and **controllability**. In the case of predictability, studies have shown that those stressors that are predictable have less of a negative impact than those that are unpredictable (Glass and Singer, 1972). Predictability can come about either because of a signal that indicates the stressor is going to occur or because of a timing or periodicity that enables one to predict when the stressor is going to occur (Singer and Davidson, 1986). The extent to which a stressor is predictable will, in turn, affect the individual's belief that he or she can control the impact of the stressor. Control refers to the extent to which the individual feels he or she can modify the stressor in terms of alleviating its impact or reducing its intensity and duration. The ability to attribute causality to controllable events, to infer predictability, or to find oneself in

circumstances that confer either predictability or controllability will determine the amount of stress experienced (Cutrona and Russel, 1989; Cutrona, 1990; Singer and Davidson, 1986).

Socio-economic status and educational differences can also have an impact on the way in which stress is perceived. Eckenrode (1983) and House, Umberson and Landis (1988) note that there are variations in help-seeking behaviours amongst persons from different socio-economic levels. It has also been suggested that those with a greater level of education have a more realistic perception of stressors and greater problem solving skills (George, 1980).

Past experience with a stressor can also affect stress perception (Chalmers, 1981). The ability to successfully cope with a stressor in the past enhances one's belief that one can effectively deal with it when it re-occurs in the present. It also enhances one's belief that one can effectively cope with the same or similar demand if it re-occurs in the future.

Social Support has also been identified as an extraorganismic variable that can effect stress perception and the ability to cope with stress. Studies carried out in the fields of Epidemiology, Medicine, Psychology and Sociology have all indicated the crucial role that social support from significant others can play in reducing or eliminating the effects of stress on the lives of individuals exposed to such stress. The description of the way in which social support intervenes, that is, how it acts as a moderator within the stress process, has been offered by numerous researchers (See Cohen and Wills, 1985; House 1981; House, Umberson and Landis, 1988; McIntosh, 1991; Payne and Jones, 1987 and Schwarzer and Leppin, 1990).

There are three points within the transactional stress process at which social support can moderate the relationship between stress and strain and/or have a main effect on stress and strain. (See Figure 2.3).

The first point of intervention is at the stage at which stress is appraised, that is at stage two. At this stage the perception that others can and will provide necessary resources to the individual experiencing the stressor/s may redefine the potential for harm posed by a situation and/or boost one's perceived capability to cope with the demands (Cohen and Wills, 1985; McIntosh, 1991). Consequently, this may prevent the actual demand from being appraised of as highly stressful or it may neutralise perception of threat completely.

The second point of intervention occurs at stage three, that is at the stage of response. Here social support may intervene between the experience of stress and the onset of symptomology, by facilitating reappraisal of the stressor so that it is perceived of as more

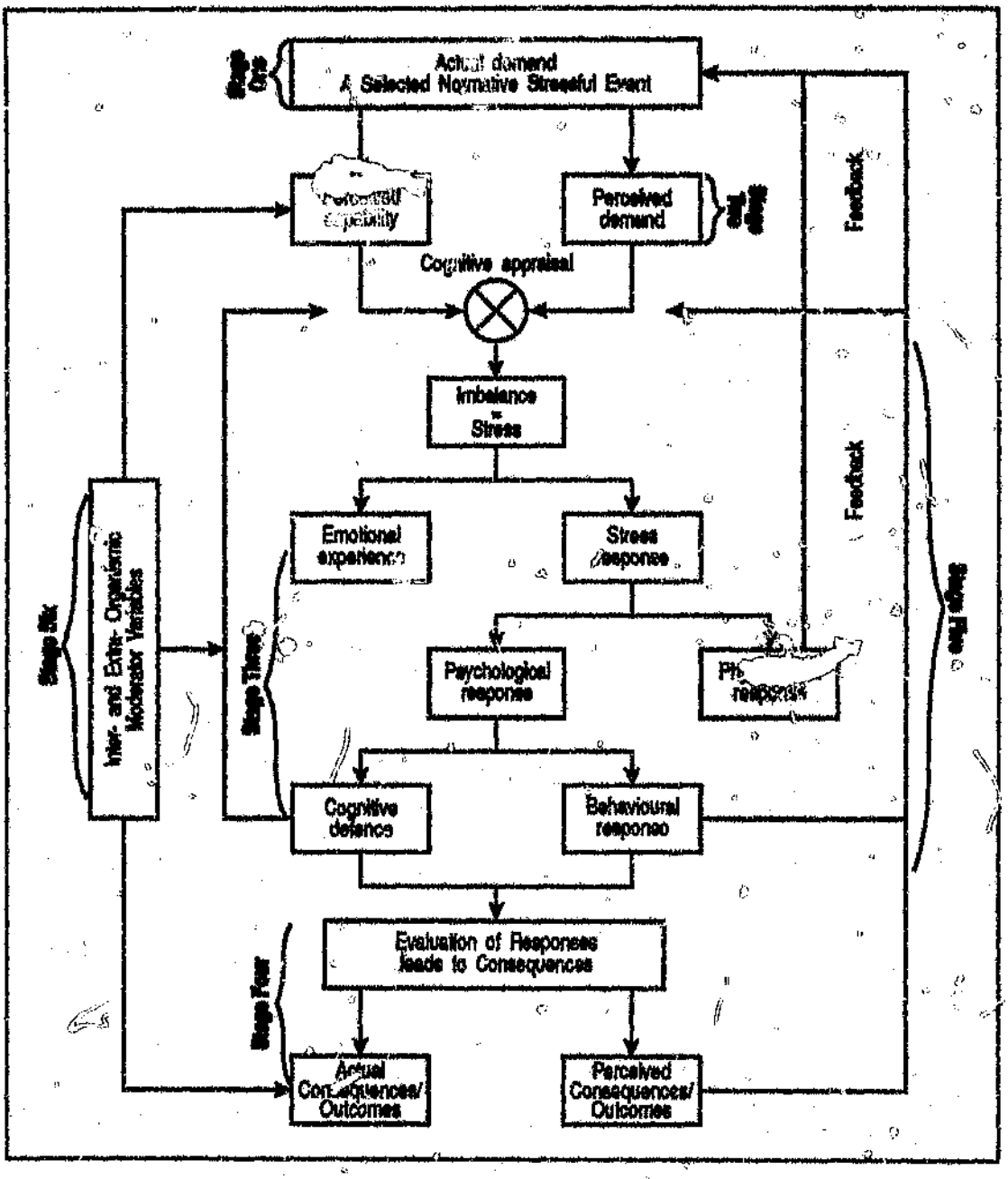

FIGURE 2.3 The Transactional Model - An Eclectic Approach

(Adapted from Cox and Mackay, 1980; Chalmers, 1981)

benign, by inhibition of maladjustive responses and/or by the facilitation of adjustive counter responses.

At the third point, social support can have a direct effect on health outcomes regardless of whether stress is experienced or not. This direct effect occurs through social support's ability

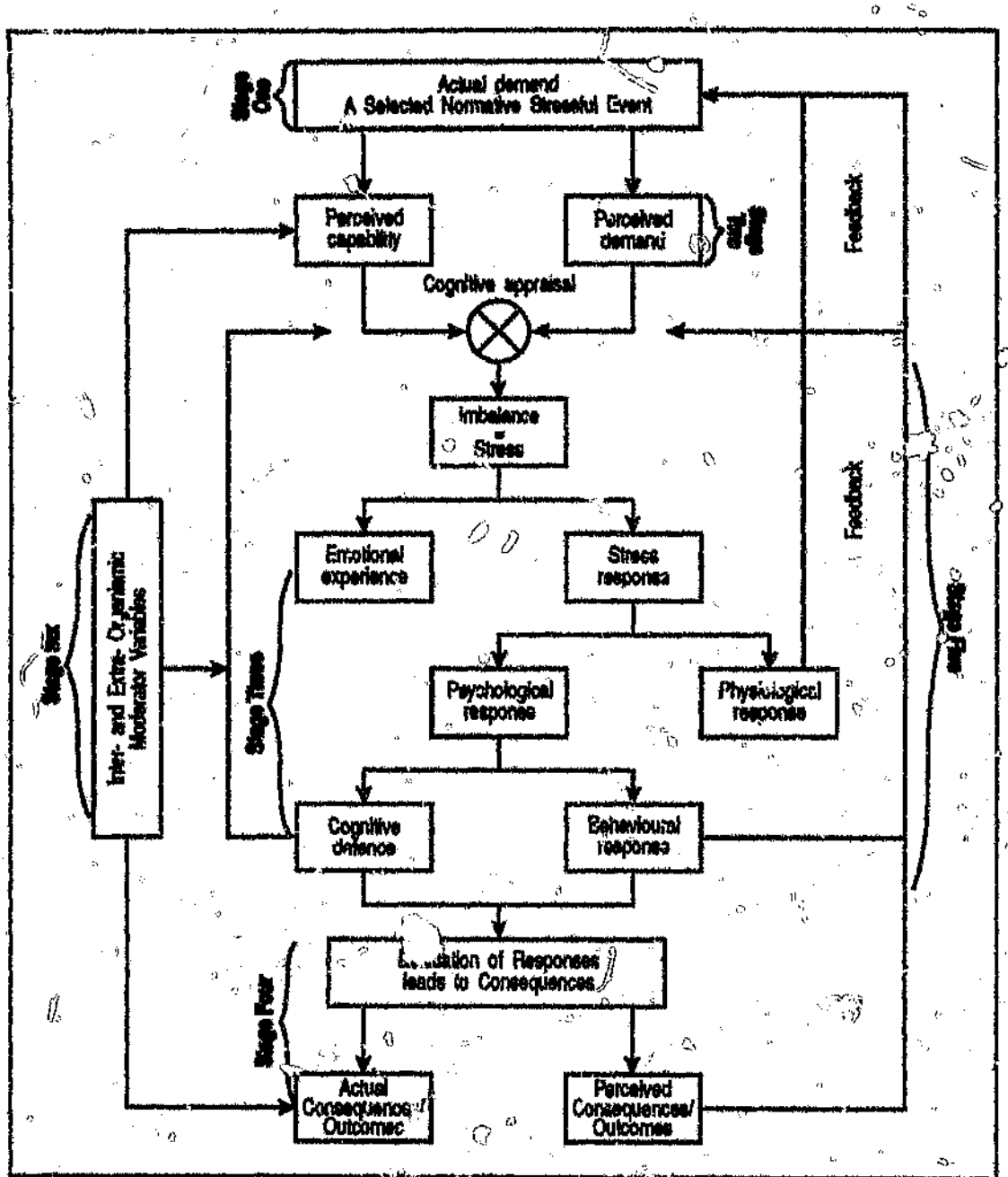

FIGURE 2.3 The Transactional Model - An Eclectic Approach

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benign, by inhibition of maladjustive responses and/or by the facilitation of adjustive counter responses.

At the third point, social support can have a direct effect on health outcomes regardless of whether stress is experienced or not. This direct effect occurs through social support's ability

to meet important human needs for affection, regard, belonging and understanding. Direct effects also occur as self-esteem is enhanced by social acceptance and this, in turn, has a positive effect on health (Marcellissen, Winnubst, Buunk and Wolff, 1986, McIntosh, 1990).

Other inter- and extra-organismic variables may work in a similar way within the stress process. They can also intervene at numerous stages within the process of stress, altering the way in which an individual perceives, responds to or copes with the demand as well as alter or moderate the individual's perceptions of the consequences of such coping responses (Chalmers, 1981). Like social support, they can be referred to as moderators in that they can moderate the impact of stress upon health. That is they can interact with stressors, reducing or eliminating any impact that a stressor may have on the individual exposed it.

The effect of these variables may not, however, always be positive. According to Chalmers (1981) these inter- or extra-organismic variables can alter perceptions in a negative direction as well. One example is that of past experience. If one's past experience with a stressor has been unsuccessful, this failure will increase perceptions of threat when one is currently faced with the same or a similar stressor. In addition, previous failure will decrease one's belief in his/her capability to cope successfully with the currently occurring stressor.

REVISING THE TRANSACTIONAL MODEL: ADOPTING AN ECLECTIC APPROACH

From the discussion above it, thus, becomes evident that the Transactional Model requires a number of revisions. Such revisions require that one adopt an eclectic approach, adding stages to the model, retaining stages still deemed to be appropriate, and excluding those that are no longer considered to be relevant. This eclectic approach becomes a logical synthesis of the earlier stress theories described above, where, in the light of recent trends in stress research, certain steps are made redundant, while others are retained and others, still, are extended upon (Chalmers, 1981).

Additions to the model may involve, inter alia, moderators. As moderators are not present in the transactional model on a firm theoretical basis and because they appear to have an impact on the stress perception process, it appears that a *sixth stage* can be added to the model. This stage can be referred to as a **Moderator Stage** and it should include only those moderators that have particular relevance to the research topic in question (See Figure 2.3.)

With regard to retaining stages within the model, the Actual Demand stage can be retained

because of its usefulness in enabling the researcher to have an anchor point f his/her stress research through the selection of a normatively stressful event. Actual Consequences can also be retained as in the case of physiological outcomes what is perceived in terms of evaluation of consequences may not always be able to mediate an actual physiological outcome (See Figure 2.3).

In terms of excluding stages within the model, the dimension of Actual Capability can be dropped in favour of and Perceived capability as it is the latter dimension that determines the reality or actuality of the capability of the individual exposed to the normatively selected stressful event.

SUMMARY/CONCLUSION:

As can be seen from the review carried out above, this person-environment/transactional type stress model, albeit with slight modifications, appears to offer the most complete and concise operationalisation of stress. As the focus of the present study is within the work stress domain, the object of the following chapter will be to offer a brief introduction into the area of work stress, moving on to a discussion of the appropriateness of the usage of the Transactional Model in this particular area of study. A rationale for the selection of variables within the present study will also be put forward in the following chapter.

CHAPTER THREE

WORK STRESS AND THE TRANSACTIONAL MODEL

There has been a tremendous amount of research conducted in the area of work stress (Melamed and Kushnir, 1991). On the basis of the general stress literature, organisational researchers have conducted studies designed to demonstrate relations between aspects of the work environment considered to be potentially stressful and specific health outcomes (Spector, Dwyer and Jex, 1988). Aspects of the work environment that have been most widely studied are those of role stressors such as role ambiguity, role clarity, role conflict, role overload and role underload and their relationship to affective outcomes such as job satisfaction and general psychological and physiological well being/health (Cooper and Payne, 1988; Jackson and Schuler, 1985; Melamed and Kushnir, 1991; Spector *et al.*, 1988).

For example, researchers such as French and Caplan (1978), House and Rizzo (1972), Kahn, Wolfe, Quinn, Snoek and Rosenthal (1964) and Rizzo, House, and Lirtzman (1970) have demonstrated that job stressors such as role conflict, role ambiguity, and role overload, are positively related to organisational and individual strains such as job dissatisfaction, propensity to leave one's job, turnover, low self-esteem, and general psychological ill-health. In addition, Jackson and Schuler (1985) have reported that role conflict and role ambiguity are positively correlated with propensity to leave one's job and negatively correlated with job satisfaction. In turn, Breaugh (1980) and Singh, Agarawala and Malhan, (1981) found that role conflict and ambiguity were negatively correlated with job and supervisory satisfaction and positively correlated with intention to leave one's job. Orpen (1982) reported that these two role stressors were related to both general psychological and physiological strains. Spector (1987a) found significant positive correlations between workload and anxiety, frustration and job dissatisfaction while Gensler, Fusilier and Mayes (1986) found positive correlations between workload and job dissatisfaction and depression. Kaufmann and Beehr (1989) reported that under-utilisation of skills, quantitative overload and job future ambiguity were all related to individual psychological strains such as job and workload dissatisfaction, boredom and depression.

By and large, this body of job stress research has been guided, either implicitly or explicitly, by the general framework of the Transactional Model, where it is assumed that the work environment causes a number of cognitive, emotional and behavioural reactions which result in poor health symptoms and disease (Bailey and Bhagat, 1987).

Cox and Mackay's (1980) working definition of stress has played a major role in job stress research, providing researchers with a rigorous tool and basis for exploring a growing number of variables that can be considered major psychological demands of the work environment (Bailey and Bhagat, 1987). Within the model, self reports of the work environment are assumed to represent *perceptions* of this environment, with these perceptions mediating the relationship between the actual environment and health outcomes (Spector *et al.*, 1988). The model has been described as a 'multiplex model', which has replaced Selye's 'umbrella term' with multiple stress process designations (Leventhal and Tomarken, 1987).

At a behavioral level, the use of such a model has meant that different behaviours or coping patterns can be expected in response to differing perceptions of multiple demand situations. Moreover, at a physiological level, different patterns of responses, accompanying subjective and behavioural events, may also be expected. The model has also allowed for the identification of classes of institutional and role relationships that are correlated with these psychological and physiological processes, which occurs at a social-interactive level. The identification of particular situations in which specific stress processes are linked to specific illness outcomes in selected sub-groups are the expected outcome of such a differentiated, multiplex approach (Bailey and Bhagat, 1987).

THE PRESENT STUDY AND THE TRANSACTIONAL MODEL

As described in the previous chapter, because of a number of criticisms of the Transactional Model, an eclectic approach was adopted in which stages within the model were both abbreviated and added to. This revised model was deemed appropriate for the present study, in the light of the types of variables and methodology that were used.

Using a questionnaire technique, the present study aimed to assess normatively selected, external organisational demands of role stress. Because the questionnaire technique is a purely subjective assessment on the part of the individual filling it in, the responses that subjects recorded took into account perceived demand and perceived capability in terms of dealing with role stress (Spector *et al.*, 1988). Any imbalance perceived to exist would be reflected in a stress score. Responses to such perceived stress were assessed at a psychological level by determining attitudes such as job satisfaction, behavioural responses such as propensity to leave, the affective state of self-esteem and the level of the individual's psychological health. The role that moderators could play in the stress process was also assessed with the focus being, more specifically, on the moderator of social support. The formal inclusion of a moderator stage within the stress model allowed for the inclusion of such

a variable into the stress process.

The revised Transactional Model also provided a framework within which the theoretical model of the present study could be assessed. The theoretical model referred to is that of the **Michigan Model** (1975).

This model was developed by members of the Institute for Social Research of the University of Michigan (Caplan, Cobb, French, Harrison and Pinneau, 1975) and has been widely validated and elaborated upon in research that has taken place in the United States, The Netherlands, The United Kingdom and South Africa (Edwards and Cooper, 1990; Eulberg, Weekley and Bhagat, 1988; Van Dijkhuizen, 1980; 1985; Winnubst, Marcellissen and Buunk, 1988.

Within this model, stress is seen as a relationship between the individual and the environment. Stress is seen to occur in this model when (1) the individual feels that there is an *imbalance* between the demands of the environment and his or her resources to meet these demands; and (2) when the environment does not provide sufficient opportunities to fulfil the individual's needs. This view of stress has parallels to the Transactional Model in which stress is defined as an interaction between the individual and the environment and in which stress is only perceived to exist if the individual believes that the stressor or demand exceeds his or her capabilities to deal with it (Cox and Mackay, 1980).

In the Michigan model, which focuses, more specifically, on work stress, stressors are defined as those demands within the work environment that are perceived by the individual as being problematic, namely, role overload, role conflict and role ambiguity. Thus this tradition focuses on chronic events rather than acute events such as bereavement, job loss, divorce, retirement, etc. (Barling, 1990; Cobb and Kasl, 1979). Within this model, stressors lead to so-called strains - all those behavioural, psychological and physiological processes that occur under the influence of excessive demands and that indicate a disturbance of normal, healthy functioning (Winnubst *et al.*, 1988). Several strains, for example, high blood pressure and high cholesterol are considered as precursors for disease, for example, coronary heart disease. Thus, the Michigan model assumes that strains can eventually lead to illness. The model further suggests that there are two types of variables that can moderate the relationship between stressors and strains. These are:

(1) **personality variables** such as Type A or Type B, hardiness, locus of control etc. and

(2) **social environment variables**, particularly social support (Winnubst *et al.*, 1988).

In adopting this model in the present study, the variables included were designated the roles of "independent variables", "moderator variables" and "dependent variables". Independent variables or stressor variables were those of **role conflict, role ambiguity** and **role overload**; the moderator variable was that of **social support** and the dependent variables or strains were those of **job satisfaction, propensity to leave one's job, self-esteem** and **psychological well-being.**

Thus, as can be seen, the use of the transactional model, more particularly, the revised transactional model, was appropriate in that it embraced the theoretical model of stress suggested in the present study. The following section is devoted to a description of the proposed model of stress used in the present study. The variables selected for study within the model will also be defined/outlined.

THE TRANSACTIONAL/MICHIGAN STRESS MODEL AND SELECTION OF THE INDEPENDENT AND DEPENDENT VARIABLES

In the present study a model of stress was proposed in which the variables selected for study were readily incorporated into the Transactional/Michigan Model of stress.

From Figure 3.1, represented below, it can be seen that the independant variables of role conflict, role ambiguity and role overload occur at the first stage of the model which is that of **actual demand** (Cox and Mackay, 1980). These actual demands are normatively selected stress events appraised by the individual exposed to them in terms of the extent to which such demands are threatening and the extent to which the individual feels capable of dealing with such a threat. If the individual perceives the threat to be too great in terms of his or her ability to deal with it, the individual will experience stress.

Within the present model, the way in which the individual responds to the stressors will be reflected at the stage of **consequences.** Consequences of stress will be measured at a psychological and behavioural level. At a psychological level, the extent of the individual's self-esteem, job satisfaction and psychological well-being will be assessed. At a behavioural level, the potential of the individual to leave his or her job will be assessed. These responses to perceived stress may, however, be moderated by supervisor social support which operates at stage six, (Figure 3.1), which is the **moderator stage.**

The selection of the independent variables of role conflict, role ambiguity and role overload were made on the basis of these variables having been identified as those which are, by and large, highly prevalent within most organisations (Cooper and Payne, 1988; Melamed and

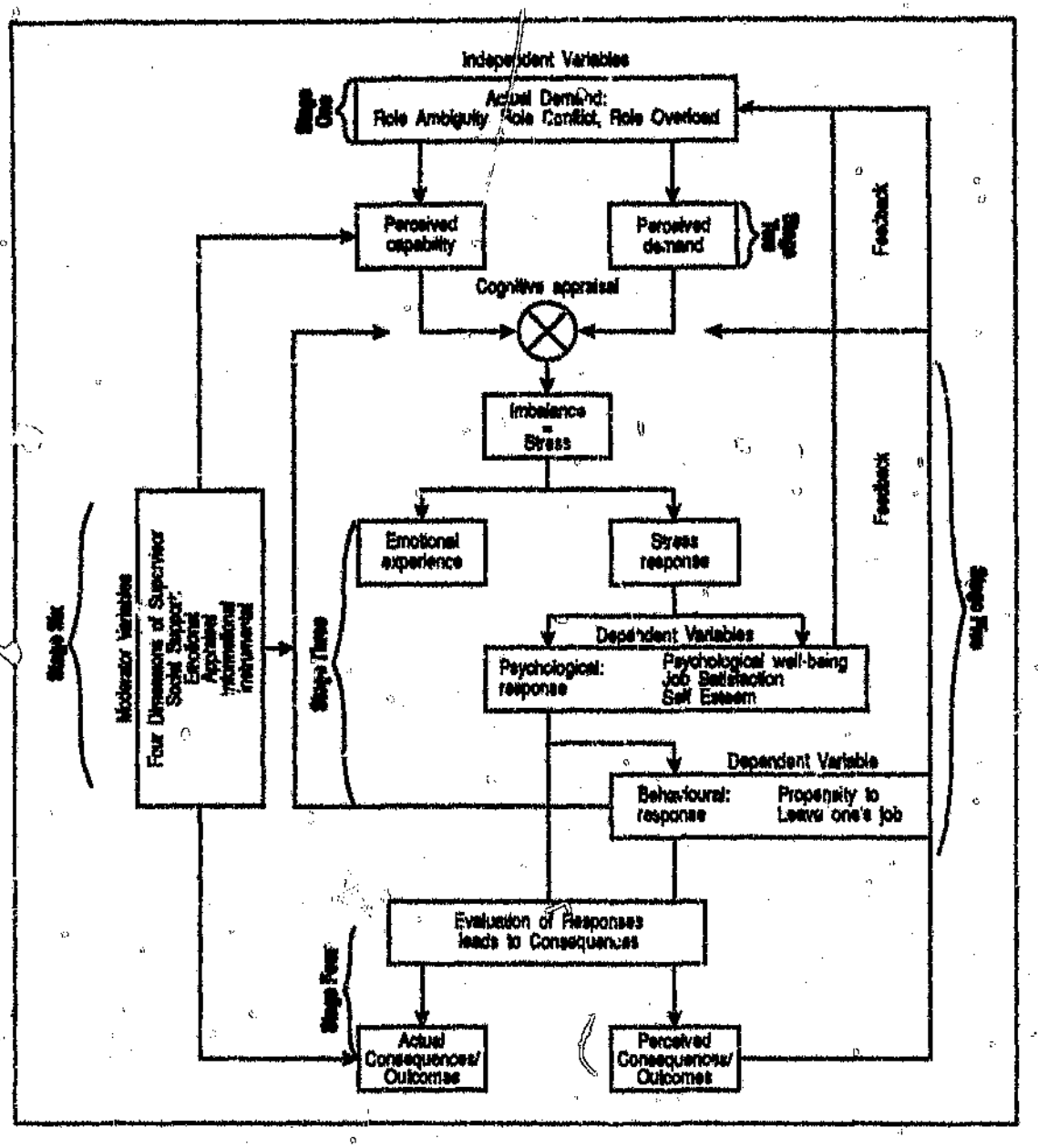

FIGURE 3.1 **The Transactional - Michigan Model of Stress**

(Adapted from Cox and Mackay, 1980; Chalmers, 1981; Caplan, Cobb, French, Harrison and Pinneau, 1975).

Kushnir, 1991). These variables were also selected on the basis of previous research having indicated that they are significantly and positively correlated with a number of outcome/dependent variables, namely, job dissatisfaction, propensity to leave one's job, low self-esteem and poor psychological health; the occurrence of such outcomes having serious implications in terms of both individual and organisational well-being (Cooper and Jones, 1988).

However, before going on to describe the relationship between these role stressors or independent variables and these strains or dependent variables, a brief introduction to role

theory will be offered. Thereafter, definitions of role conflict, role ambiguity and role overload will be outlined, followed by a brief review of the literature on the relationship between these role stressors and the strains that they are purported to be correlated with.

ROLE THEORY

Role Theory or the Theory of Role Dynamics (Kahn, Wolfe, Quinn, Snoek and Rosenthal, 1964), has been used extensively to explain the stresses associated with work (Sawyer, 1992; Van Sell, Brief and Schuler, 1981). According to this theory, role concepts are "the major means for linking the individual and organisational levels of research and theory; (they are) at once the building blocks of social systems and the summation of the requirements with which social systems confront their members as individuals" (Kahn *et al.*, 1964; p.197).

Within an organisational setting, the term 'role' is defined as a set of expectations applied to the incumbent of a particular position by the incumbent and by the role senders within and beyond an organisations boundaries (Van Sell *et al.*, 1981). In turn, 'role stress' is defined as any aspect of this set of expectations that has adverse consequences for the individual role incumbent.

According to Kahn *et al.* (1964), in order for an individual to adequately perform his or her role, he or she must know (a) what the expectations of the role set are in terms of rights, duties and responsibilities, (b) what activities will fulfill the role responsibilities (i.e. means-ends knowledge), and (c) what the consequences of role performance are to the self, others and the organisation.

Role Ambiguity may arise when these three types of information do not exist or when they are inadequately communicated (Sawyer, 1992). That is, role ambiguity may arise when an individual has inadequate information about his or her work role, where there is a lack of clarity about work objectives associated with the role, about work supervisors and colleagues expectations of the work role and about the scope and responsibilities of the job (Cooper and Marshall, 1978). Experienced role ambiguity reflects the way an individual internalises, perceives and interprets objective ambiguity in the role context.

Role Conflict may arise when an individual in a particular work role is torn by conflicting job demands or is doing things he/she really does not want to do or does not think is part of the job specification (Cooper and Marshall, 1978). There are numerous situations in which conflict can arise. For example, conflict can arise when a person receives a contradictory set of

instructions from a role sender. This type of conflict is referred to as *intra-sender conflict*. Another situation in which conflict can arise, occurs when an individual receives incompatible information from different members of the organisation. In this instance the conflict is referred to as *inter-sender conflict*. When the expectations for one role are in conflict with those for another role played by the same person, the type of conflict experienced is referred to as *inter-role conflict*. *Person-role conflict* occurs when the personal values and needs of an individual are violated by certain job or task requirements (Cox, 1978; Katz and Kahn, 1972).

Role Overload represents the volume of demands that constitute an individual's role (Schaubroeck, Cotton and Jennings, 1989). French and Caplan (1978) distinguish between two types of overload, namely *Quantitative overload* and *Qualitative overload*. Quantitative overload exists when the person has more work to do than he/she feels can be done in a given period of time. Qualitative overload occurs when the person feels that the work requires skills, abilities and/or knowledge beyond what he/she possesses (French and Caplan, 1978).

CONSEQUENCES OF ROLE AMBIGUITY, CONFLICT AND OVERLOAD:

JOB SATISFACTION AND PROPENSITY TO LEAVE:

A vast amount of research has been conducted into the nature, causes and correlates of job satisfaction and propensity to leave (Locke, 1983; Schaubroeck *et al.*, 1989).

The term job satisfaction has been used to refer to affective attitudes or orientations on the part of individual's towards their jobs. (Steers and Porter, 1981). It has been defined as the positive orientation of an individual towards the role which he/she is presently occupying (Vroom, 1964). While numerous other definitions of job satisfaction abound, this definition, with its emphasis on the 'role' occupied by the individual, bears particular relevance to the current research.

Conceptual models and relational research suggest that satisfaction and turnover intentions are complementary attitudinal components of an individual's intention to terminate employment. These models view job attitudes, especially satisfaction, as salient precursors of behavioural intentions and posit that intention, in turn, constitutes the most proximate determinant of turnover behaviour (Fishbein and Ajzen, 1975; Parasuraman, 1982; Schaubroeck *et al.*, 1989, Werbel and Bedeian, 1989).

Werbel *et al.* (1989) define intention to quit/propensity to leave as an individual's perceived

probability of staying in an employing organisation or terminating employment" (p.275). This construct is drawn form the theory of reasoned action which holds that a person's intention to perform a specific behaviour is the immediate determinant of the behaviour (Fishbein and Ajzen, 1975).

A vast amount of research has accumulated indicating that both job satisfaction and propensity to leave are negatively affected by the experience of role conflict, role ambiguity and role overload (Bedeian and Armenakis, 1981; French and Caplan, 1978; Johnson and Stinson, 1975; Kahn *et al.*, 1964; Kemery, Bedeian, Mossholder and Touliatos, 1985; Schuler, 1982).

For example, the relationship between high levels of role overload and low levels of job satisfaction were demonstrated in a study by French and Caplan (1978). In studies carried out by Kahn *et al.* (1964) and Margolis, Kroes and Quinn (1974) it was found that role conflict and role ambiguity were significantly related to both lower job satisfaction and higher propensity to leave one's job. Ross and Zander (1957), in turn, demonstrated a relationship between job satisfaction and turnover intentions, indicating that those most dissatisfied with their jobs were those most likely to leave.

SELF-ESTEEM AND PSYCHOLOGICAL WELL-BEING:

Self-esteem and Psychological Well-being are also noted in the literature as variables negatively affected by the experience of role stress.

Muhlenkamp and Sayles (1986) refer to self-esteem as a learned phenomenon involving a lifelong process. Such a process revolves around the interaction of the individual with the social environment, referring primarily to the family of origin and including significant others as they vary across the individual's lifespan. The high self-esteem person is conceptualised as liking or valuing him/herself as well as seeing him/herself as competent in dealing with the world he/she perceives. The low self-esteem person is conceptualised as disliking and devaluing him/herself and in general perceiving him/herself as not competent to deal effectively with his/her environment (Hobfoll, 1985; Tholts, 1985).

According to Stanwyck (1983) self-esteem in adulthood is primarily a reflection of social relationships and career development. Consequently, if career development is encumbered by stressful events at work, self-esteem may, to some extent, become impaired.

Hobfoll, Nadler and Lieberman (1986), note that those with high self-esteem are better able

to resist stress while those with lower self-esteem have lower stress resistance. In [illegible], Weiner (1983) showed that the way an individual deals with a stressor situation in terms of perceived success or perceived failure can have repercussions for the individual's self-esteem. Those who succeeded and could attribute this success to themselves had increased self-esteem while those who had failed and could attribute this failure to themselves had decreased self-esteem.

In accordance with the transactional model of stress, those exposed to a situation perceived of as stressful, if unable to cope with it, will have their self-esteem eroded. Conversely, those who can successfully cope with the stressor situation will have their self-esteem enhanced. This is depicted by the Feedback Loop in Figure 2.3.

According to Thoits (1985) self-esteem is *intimately tied* to psychological well-being. Reflective positive self evaluations generate satisfaction, contentment and other positively toned affective states. Reflected negative self evaluations are a primary source of anxiety and depression. Perceived inability to cope with perceived stress can be conceived of as a reflected negative self evaluation which may serve to erode self-esteem and in turn lead to poor psychological well-being, evidenced in the experience of anxiety and depression (Abramson, Seligman and Teasdale, 1978; Brown and Harris, 1978; Kaplan, 1980; Thoits, 1985). Thoits (1985) defin psychological well-being as the extent to which individuals are free of symptoms such as anxiety, depression, distress and demoralisation. Both self-esteem and psychological well-being may be affected by the experience of stressors or stressful circumstances. One type of stress that can exert a negative impact upon self-esteem and psychological health is that of role stress. Thoits (1985) notes that undesirable changes in role relationships and role-related difficulties may be most likely to threaten aspects of an individual's self and thereby, an individual's psychological well-being.

Evidence that perceptions of role ambiguity, conflict and overload are negatively related to self-esteem and psychological well-being has been widely documented in the research literature (Beehr, 1976; Beehr, King and King, 1990; Cooper and Payne, 1989; French and Caplan, 1978; Frone, 1990; Ganster, Fusilier and Mayes, 1986; Jackson and Schuler, 1985; Kaufmann and Beehr, 1989; Margolis, Kroes and Quinn, 1974; Rizzo, House and Lirtzman, 1970; Schaubroeck, Cotton and Jennings, 1989; Sawyer, 1992; Spector, Dwyer and Jex, 1988).

For example, Ganster, Fusilier and Mayes (1986) demonstrated that role ambiguity and role

conflict was positively correlated with depression. Similarly, Kaufmann and Beehr (1989) indicated that workload and ambiguity had a direct positive effect on depression, while Schaubroeck, Cotton and Jennings (1989) showed that role conflict and overload were correlated with tension. In addition, Margolis, Kroes and Quinn (1974) demonstrated that role ambiguity and role conflict were significantly related to indicators of mental ill-health such as depressed mood and lowered self-esteem, while research by French and Caplan (1978) indicated that role overload was related to lowered self-esteem.

SUMMARY/CONCLUSION

The previous section was devoted to a description of the stress model to be used as a framework for the present study. In addition, the independent and dependent variables selected for study were defined and the relationship between these variables, as documented in the research literature, was outlined.

It is, however, noted, that despite the documentation supporting such linkages between role stress and the above outlined outcomes, more attention needs to be paid to *intervening factors* that may moderate the relationship between these specific stressors and outcome variables.

In systematic explorations of potential moderating agents, it has been suggested that, in terms of role stress, social support is one of the most likely and effective means of alleviating its negative effects (Barling, 1990; Cobb, 1976; Kirmeyer and Dougherty, 1988; French and Caplan, 1978, French, Rogers, and Cobb, 1974; McIntosh, 1991; Winnubst, Marcelissen and Buunk, 1988). Consequently, if a greater understanding of the work stress process is to be achieved, a more detailed study of this particular moderator and how and when it operates within the work stress sequence needs to be undertaken. The following chapter will subsequently focus on social support, examining the way in which it is conceptualised and operationalised. An extensive review of the social support literature will also be undertaken with a view to outlining evidence that supports the relationship of the concept to stress and health. This review will also seek to isolate unique aspects of research findings for the contribution that they can make to a greater understanding of the social support phenomenon. Finally, this review will seek to identify research problems and propose methods whereby these problem areas can be redressed within the present research.

CHAPTER FOUR - SOCIAL SUPPORT: INTRODUCTION AND HISTORY

As a concept social support has been both explicitly and implicitly central in much of the early literary, religious, sociological, psychological and medical thought and writing (House, 1981). The earliest indication of the importance of the social context for health was found by sociologists carrying out studies at the University of Chicago during the 1920's. They found that 'social problems' resulted when 'socially cohesive communities' were disrupted by industrial relocation.

Further evidence of the negative effects of disruption on social networks was found by Emile Durkheim in his seminal study of suicide (Durkheim, 1951 in Bloom, 1990). Durkheim believed that loss of 'social integration' or 'anomie' was antithetical to psychological well-being. He attributed this loss of social integration to the emergence of a highly technical industrialized society with its subsequent urban migration and dissolution of family ties, support and social constraints. He demonstrated that Protestants and unmarried persons were more inclined to commit suicide than those that were married and Catholic. He explained this by proposing that there was a greater degree of social integration and attachment amongst the latter (House, 1981).

During the 1970's, contemporary social epidemiologists reconfirmed Durkheim's tenets by linking the absence of social ties to family and friends, and lack of involvement with community and religious organisations to premature death, regardless of one's lifestyle and initial health (Bloom, 1990).

However, specific interest in the study of social support was stimulated largely by the work of two physician epidemiologists, John Cassel and Sidney Cobb. Both Cassel (1976) and Cobb (1976) emphasised the centrality of social relationships and support to the maintenance of health, as well as their ability to moderate or buffer the potentially deleterious health effects of psychosocial stress (House, Umberson and Landis, 1988). Their observations were clearly related, theoretically and empirically, to the longstanding sociological literature on social integration and social isolation (House *et al.*, 1988).

Since then, there has been a virtual explosion of research on the social support concept as well as an increase in the number of treatment and intervention programmes that use social support for therapeutic assistance (Antonnucl, Fuhrer and Jackson, 1990; Bloom, 1990; Coyne

and Bolger, 1990; Coyne and Downey, 1991).

This research has been carried out across a vast breadth of disciplines including anthropology, architecture, environmental design, epidemiology, gerontology, health education and planning, medicine, psychology, social work and sociology (Cohen and Syme, 1985). This principal interest in social support was motivated by its purported relationship to health and well-being. A main theme in the literature has been that social support can protect or buffer individuals against the negative consequences of stressful circumstances upon mental and physical health, including depression, psychosomatic symptoms and physical disease as well as have a general positive effect on health and well-being (House, 1981; Winnubst, Buunk and Marcelissen, 1988). Thus, those endowed with greater, or in some way, richer, support are believed to be better able to preserve psychological and physiological health when confronted with stressful situations (Hobfoll, Freedy, Lane and Geller, 1990). Frequently cited stressful circumstances are those of stress resulting from work as well as physical impairment, aging and difficult life events (McIntosh, 1991).

However, as with the stress literature (See Chapter 2), the study of social support has been plagued with controversy, the explosion of investigations into the concept leading to an uncovering of a "Pandora's box of complexities" (Hobfoll *et al.*, 1990; p. 465).

Shumaker and Brownell (1984) have pointed out that conceptual ambiguity characterises the research on social support with predictive validity being emphasised at the expense of construct validity. Many researchers, in the quest to demonstrate significant correlations between support and well-being, have ignored the "persistent vagueness in the concept of social support and the ambiguity as to its referents in the features and processes of respondent's interpersonal lives" (Coyne and Bolger, 1990; p.149). For many researchers in the field, the meaning of social support seemed so obvious that often no attempt was made to offer a precise definition of the concept. In some instances, definitions that were put forward were so vague and circular that they rendered the definition almost meaningless (Winnubst, Marcelissen and Buunk, 1988). For example Caplan, Cobb, French, Harrison and Pinneau (1975) defined social support as "any input, directly provided by an individual (or group) which moves the receiver of that input towards goals which the receiver desires." (pg. 211). Winnubst *et al.* (1988) argue that such a definition includes not only all kinds of informal support but also diverse types of formal aid including social benefits, commercial services (such as those delivered by a plumber) and treatment provided by a physician or therapist. Other researchers such as Wortman (1984) note that some definitions include elements as divergent as financial resources, self-esteem and job satisfaction, or, even more far removed

from the concept of social support, variables such as 'adaptability' or 'crying'. These divergent elements and variables create additional problems as the may overlap considerably with the outcomes that are assessed in a particular study (Winnubst *et al.*, 1988).

Thus, it can be seen that the research appeal of social support has been based, neither on the specificity of the concept, nor on the emergence of some universally empirical measure (McIntosh, 1991). Vaux (1988) notes that the early decades of work on social support were marked by a "frenzy of empirical research and a dearth of theory to guide and synthesize it" (p. 507). Imprecision in conceptualisation was mirrored in imprecise measures of support, with the use of such measures within research adding to the controversy surrounding the literature (Bailey and Bhagat, 1987; House, 1981).

However, before going on to examine the nature of this controversy the present chapter will outline a number of definitions of social support proposed by early researchers that *do* offer *some* valuable theoretical and empirical insights into the concept. Thereafter, a review of the literature which has provided evidence on the proposed relationship between social support, stress and health will be undertaken.

TOWARDS A DEFINITION OF SOCIAL SUPPORT

Over the last two decades, a wide variety of conceptualisations have abounded. Researchers have referred to social support using a plethora of different terms. According to House (1981), Cutrona and Russel (1989) and Winnubst *et al.* (1988), there is some consensus amongst these definitions as to the range of aspects of relationships that are within the general domain of social support. Yet, at the same time, there is still a considerable amount of diversity within these definitions as well as considerable disagreement as to which specific aspects of these definitions are the most important (House, 1981).

For example, Caplan (1976) emphasised emotional and cognitive support as well as tangible support in his classification scheme and, furthermore, he highlighted mutual obligation and reciprocity of need satisfaction as characteristics of such a system.

Cobb (1976) defined social support in terms of 'informational feedback'. He proposed that this feedback meets the individual's basic social and psychological needs through the provision of information, which in turn leads the individual to believe that he is cared for and loved (emotional support), esteemed and valued (esteem support) and that he belongs to a network of communication and mutual obligation (network support). Cobb (1979) later distinguished between instrumental support or counselling, active support or mothering, and material support

or goods and services.

Pinneau (1975) distinguished between tangible, appraisa and emotional support. Tangible support referred to assistance through an intervention in the person's objective environment or circumstances eg. providing a loan of money or other resources. Appraisal support or information support referred to a psychological form of help which adds to the individual's knowledge eg. explaining a method for solving a problem. Emotional support referred to the communication of information which directly meets basic social-emotional needs eg. a statement of esteem for the person, attentive listening to the person, etc.

Caplan and Killilea (1976), in turn, defined social support as attachments among individuals or between groups that serve to produce adaptive competence in dealing with short term crises and life transitions as well as long term challenges, stresses and privations. This is achieved through;

(a) promoting emotional mastery,

(b) offering guidance regarding the field of relevant forces involved in expectable problems and methods of dealing with them, and

(c) providing feedback about an individual's behaviour that validates his conception of his own identity and fosters improved performance based on adequate self-evaluation.

Kahn and Antonucci (1980) went on to define social support as interpersonal transactions that included one or more of the following key elements: affect, affirmation and aid.

Henderson (1977) went a step further, hypothesizing that humans are, in fact, biologically programmed to prefer to be members of groups and to display emotional distress when the presence of important others are lost. He suggested that people need others because of what they supply, namely:- opportunities for attachment, social integration, nurturing, reassurances of worth, a sense of reliable alliance and the obtaining of guidance.

House (1981) began a process of clarification of these diverse yet linked definitions, suggesting that if one wanted to move towards a more adequate conception of social support the question that needs to be asked is, *"Who gives what to whom regarding which problems?"* (pg 22). He proposed a broad yet nevertheless precise definition which took into account the different types of social support that may be available to a recipient of support, the different sources from which such support could be forthcoming and the different mechanisms through which such support could operate.

He referred to four types of social support namely:- Emotional Support, Instrumental Support,

Informational Support and Appraisal Support. They derived from the numerous conceptions outlined above, all of which included one or more, though not all of House's four types.

(i) *Emotional support* was defined as that which entails the provision of empathy, caring, love and trust.

(ii) *Instrumental support* was defined as that which involves behaviours that directly help the person in need. For example, helping others do their work or lending them money. House (1981) stresses, however, that it is important to recognize that a purely instrumental act also has psychological-emotional undertones. From a positive point of view it can imply, for example, in the case of helping one with a loan, that one is cared for and valued to the extent that the provider of such instrumental support will be prepared to lend money in order to help the recipient of such support. However, from a negative point of view, providing instrumental support in the form of lending a recipient money could provide a communication from provider to recipient that the latter is inadequate in terms of being able to provide for him/herself (House, 1981).

(iii) *Informational support* was defined as that which involves providing a person with information that they can use in coping with personal and environmental problems. For example, informing an unemployed person of existing job opportunities. As opposed to instrumental support such information in and of itself is not helpful. Rather, it helps people to help themselves. However, informational support can constitute instrumental support. For instance, in a case where the person's major need is job training. Informational support can also imply emotional support. This may occur as the individual receiving such support may interpret the provider's offer of information as a sign of the provider's interest and caring for the individual's well-being. (House, 1981).

(iv) *Appraisal support* also involves the transmission of information. However, such information does not imply the affect of emotional support nor the aid of informational support. Rather it is relevant to self-evaluation or social comparison - allowing the individual to compare himself to others in order to determine how well or how poorly he/she is coping or performing. As such, appraisal support can have both negative and positive consequences depending on the type of feedback it provides (House, 1981).

Subsequent to House's (1981) development of this four-dimension definition of social support, a study carried out by Rose (1986) attempted to provide empirical support for the parallels across models, in terms of each model's support components. Two subject groups were used.

The first group reported a list of helping behaviours they had recently received. The second group were given this list along with a description of a number of support classification schemes. This second group were then asked to slot the reported behaviours into the different categories of the various support classification schemes. Results indicated that very close parallels between schemes did exist. A behaviour falling into a certain category within one scheme was very readily and appropriately slotted by the second group, into similar categories within the other schemes. Thus, despite the use of different terminology to describe different types of support within each scheme, it appeared that the various schemes still all focused on a common set of support dimensions.

Cutrona and Russel (1989) in reviewing the study carried out by Rose (1986) concurred with House (1981) in identifying the four types of support outlined above. However, they also referred to a fifth type of support which they called network support or social integration. Although House (1981) did not refer to this as a 'type' of support, he did consider this aspect when he went on to propose that the various types of social support he had described could be made available to the recipient through a number of providers or sources of social support. These sources of support could be friends, family, spouse, neighbours, community and health-care professionals, work supervisors/bosses and/or coworkers/colleagues. These sources would thus serve to make up the network of support within which a recipient would be socially integrated or embedded (House, 1981).

In addition, House (1981) proposed that the different types of support coming from these various sources within the network would operate through two different mechanisms, producing one or both of two possible effects. These effects were referred to as the **Main/Direct Effect** of Social Support and the **Moderating Effect** of Social Support.

THE MAIN EFFECT OF SOCIAL SUPPORT:

The main effect of social support on stress and health was one that is said to occur because the regular social interaction implied by 'social support' would provide the individual with regular positive experiences and a set of stable, socially rewarding roles in the community (Cohen and Wills, 1985). Such regular, positive social interaction inspires confidence in individuals that others will meet their needs for support in the event of their being confronted with stressful events (Sarason, Pierce and Sarason, 1990).

It was proposed that main effects operate by changing the amount of stress that an individual perceives in a situation (therefore, having an indirect effect on well-being), or by directly affecting health (McIntosh, 1991).

With regard to social support's main effect on work stress, it was proposed that support could directly reduce occupational stress and thus (indirectly) have a positive effect on well-being. This effect could occur as a result of the effect of social support upon appraisal/perceptions of stressors, as the individual who has an internalised sense of being valued, loved and cared for (socially supported) will be less apt than those with poor support to appraise a situation as threatening (McIntosh, 1991). (See Figure 4.1. - arrow 'a' and Figure 4.2. - Point 1.).

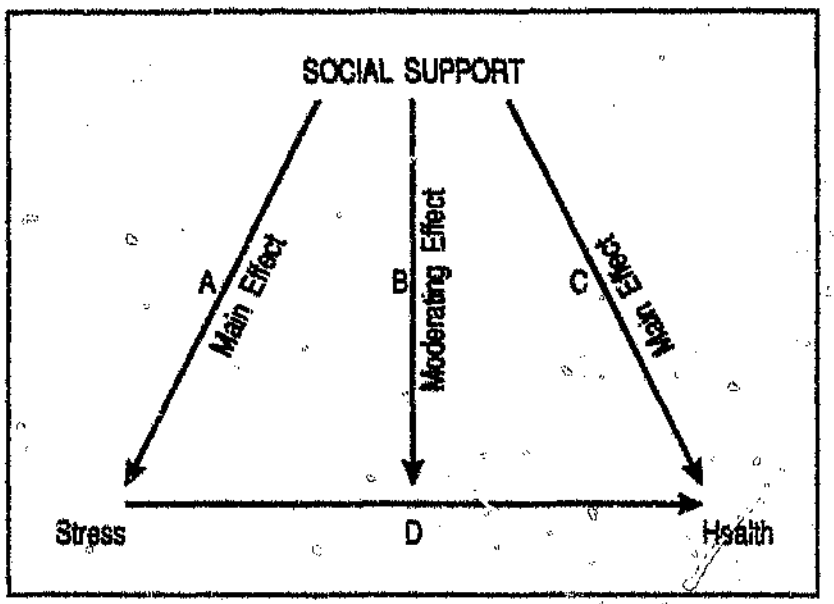

FIGURE 4.1 The Effects of Social Support

(Adapted from House, 1981).

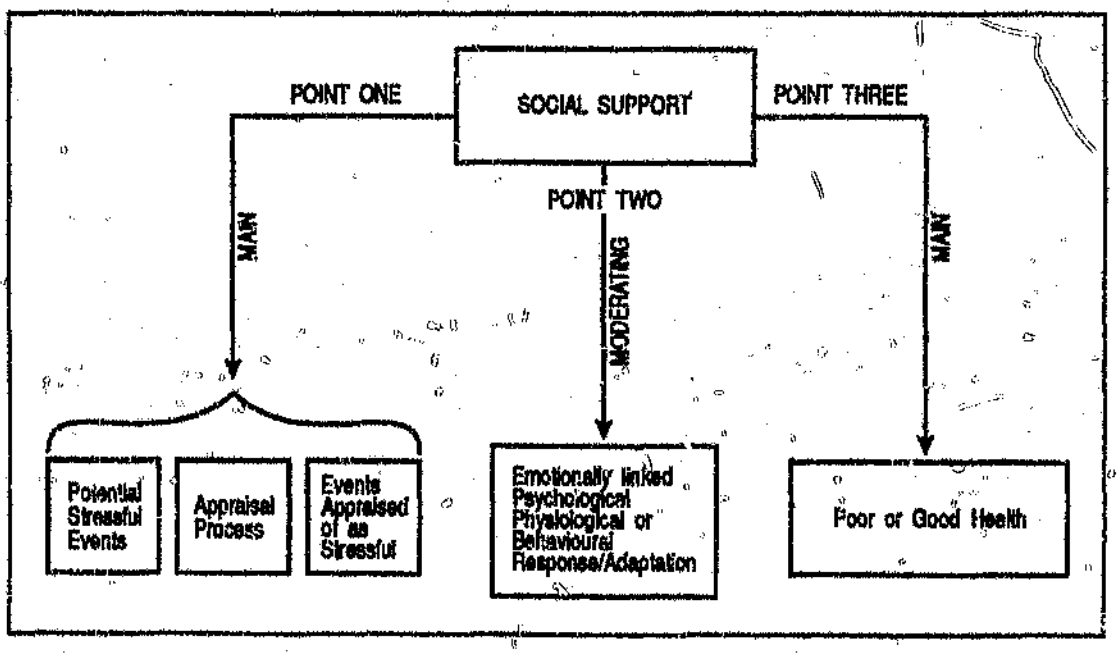

FIGURE 4.2

(Adapted from Cohen & Wills, 1985).

From Figure 4.2. - Point 1., it can be seen that in the event of the occurrence of a stressful event, social support could prevent or attenuate a stress appraisal response. The perception that others can and will provide necessary resources to the individual experiencing the stressor/s may redefine the potential for harm posed by a situation and/or boost one's perceived capability to cope with the demands. Consequently, this could prevent the stressor situation/s from being appraised of as highly stressful or the perception of threat could be completely circumvented (Cohen and Wills, 1985; Cox and Mackay, 1978; Lazarus and Folkman, 1984). This main effect could, in turn, have an *indirect* positive effect on health as represented by arrow 'd' in Figure 4.1.

Social support's *direct* effect on, and enhancement of, health and well-being is represented by arrow 'c', Figure 4.1. This direct effect may occur because social support can meet important needs of the individual for security, social contact, approval, belonging and affection (Cohen and Wills, 1985, House, 1981). Such an effect would occur irrespective of whether the individual experiences stress or not. With regard to social support's direct effect on health in the work environment, support provided by supervisors and co-workers could satisfy work related motivations for affiliation, approval and accurate appraisal of the self and the environment; generally leaving workers more satisfied with themselves and their jobs.

THE MODERATING EFFECT OF SOCIAL SUPPORT:

When social support acts as a stress moderator, as represented by arrow 'b in Figure 4.1, and Point 2. in Figure 4.2., it could operate in two different ways. It could result in either the re-appraisal/secondary appraisal of the event/s appraised of as stressful at Point 1., or it could intervene between the experience of stress and the onset of symptomology by "providing a solution to the problem, reducing its perceived importance, by tranquillising the neuroendocrine system so that people are less reactive to stress and/or by facilitating healthful behaviours" (Cohen and Wills, 1985, p. 313). Thus, the moderating effect may operate by a process of secondary appraisal, by interrupting damaging psychological and/or physiological responses to perceptions of stressors, or by enhancing health-producing or inhibiting health-threatening behavioural responses to perceived stressors (McIntosh, 1991).

House (1981) also noted that there are three different *patterns* of main and moderating effects. These are a pure moderating effect, a pure main effect or a pattern in which both main and moderating effects are observed.

In Figure (4a) a pure moderating effect is illustrated.

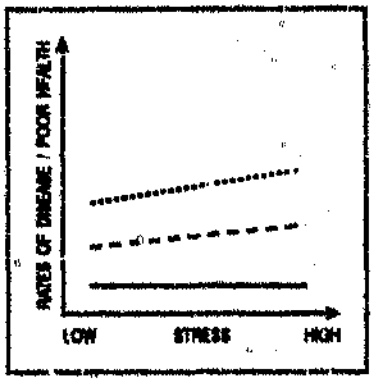

FIGURE 4(c) Main and Moderating Effect

(Adapted from House, 1981)

SUMMARY/CONCLUSION:

The previous section has been devoted to an explanation of the social support concept. Definitions of the concept have been outlined with special emphasis on the definition offered by House (1981). House (1981) has proposed that social support is made up of four different dimensions that work through two different mechanisms, namely the main and moderating effect. He has further noted that there are three different patterns of these two effects, ie., a pure moderating effect, a pure main effect and a mixed pattern of both a moderating and a main effect.

Support for the positive effect of social support, operating through these described mechanisms is evident in a vast amount of research conducted on the concept in a variety of different contexts. The following section is devoted to outlining this research evidence.

The purpose of this research review is to:

(1) outline the evidence that *supports* the relationship of the concept to stress and health,

(2) to *identify research problems* so that methods can be proposed whereby these problem areas can be redressed, and

(3) to *isolate unique aspects* of research findings in the various contexts for the contribution that they can make to a better overall understanding of the social support phenomenon.

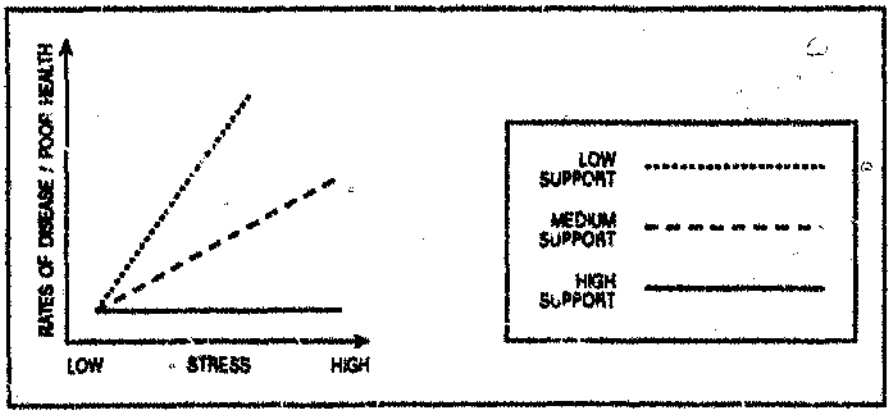

FIGURE 4(a) Patterns of Social Support Effects Moderating Only

(Adapted from House, 1981).

In this instance, when social support is high, stress has little or no effect on health. As social support decreases, the effects on health become increasingly adverse. Alternatively, when stress is low, social support (irrespective of its level) has little beneficial effect on health.

In contrast, in Figure (4b) social support can have a purely main effect on health with the slope of the relationship between stress and health being unaffected by levels of social support, thus indicating no moderating.

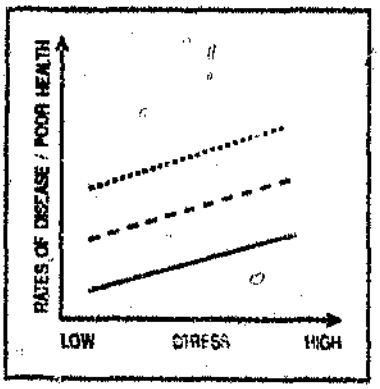

FIGURE 4(b) Main Effect Only

(Adapted from House, 1981).

In Figure (4c) social support has both a main and moderating effect on the relationship of stress to health. In this instance the three lines are not parallel, indicating a moderating effect. Yet even when stress is low people with high support are healthier. This indicates a main effect of support on health.

SOCIAL SUPPORT - A REVIEW OF THE LITERATURE:

Early research evidence on the differing types, sources and patterns of effect of social support was provided by a vast body of research literature (House, 1981). Results from such research suggested that social support could have either a main effect on stress and health or a moderating effect in the relationship between stress and health. In some instances both effects occurred. Such research also demonstrated the existence of the numerous types and sources of support, described above, examining how they operate in a wide variety of situations and contexts. Topics under study were also highly diverse, the most pertinent being those studies that examined the relationship of social support to mortality and those that looked at the role that social support could play in the relationship between life event stress and organisational stress and mental and physical well being. Some of the empirical findings will be discussed below:

SOCIAL SUPPORT LABORATORY STUDIES

Laboratory research carried out in the 1950's and 1960's, observed the potential importance of social support's effect on health and well-being. For example, in 1967, Back and Bogdonoff performed a series of laboratory experiments in which subjects were exposed to both stressful physiological and psychological tasks. The experiments were made up of three groups of subjects - those who attended the experiments with a friend, those who attended the experiments on their own, and those who attended on their own but were exposed to a group task prior to the main experimental implementation. Results demonstrated that negative physiological arousal was greatest in those attending the experiment on their own as opposed to those who came with friends. Those who attended individually but were involved in the group task prior to the main implementation showed less arousal in the experimental session as compared to those attending on their own. Though group tasks subjects still showed higher arousal as compared to those who came with a friend, the latter showing the least negative arousal of all three groups. These results suggested that individuals are somehow protected against the effect of (experimental) stressors by the presence of familiar others such as friends or, to a lesser degree, other individuals with whom they have previously interacted (House, 1981). It appears that these others provided some form of emotional and/or informational support. In terms of emotional social support, being in the presence of familiar others could have been reassuring because implicitly or explicitly they conveyed the feeling that one was cared for and therefore safe. In terms of informational social support, seeing that others remained calm in the specific situation/s may have allowed one to appraise of the situation/s as being less threatening.

Other laboratory studies of note were those carried out by Schacter (1959) and Mechanic (1962).

Schacter (1959) demonstrated that when individuals are confronted by a stress-inducing experience they will actually seek out social support if they are given the opportunity. However, Samoff and Zimbardo (1961) suggest that if an individual is emotionally aroused for reasons that are socially unacceptable, the opposite will occur. That is, the individual will actually avoid social contact, with the latter only leading to an increase in anxiety if unavoidable.

Mechanic (1962) found that in certain situations, some types of support can exacerbate negative perceptions of, and responses to, stress. In a study on students preparing for exams, he found that informational and appraisal support could exacerbate stress perceptions and responses in the short term. This may have occurred if individuals felt their preparation to be inadequate when compared to others. However, in the same instance, emotional support from spouses reduced exam anxieties and tensions, thus appearing to be a more benign and effective type of support, given the particular situation.

The findings observed in these studies provided a contribution to a greater understanding of the support concept in that they seemed to indicate that (1) there are *different types* of social support and that depending on the situation, some types of support may be less appropriate than others in terms of helping recipients deal with stress, and that (2) in certain instances, different types of support may even exacerbate stress perceptions and responses to stress. In addition, (3) these studies show that in certain situations some *sources* of support can be more beneficial as compared to other sources (House, 1981).

FIELD STUDIES OF SOCIAL SUPPORT

Some of the most compelling evidence for the value of social support comes from field studies of people under severe stress, for example, those who have been in concentration camps or those who have suffered in natural catastrophes. Eitinger and Strom (1973) did a follow up study of the Norwegian survivors of Nazi concentration camps finding that individuals who had been able to retain close ties to family, friends or subcultural groups based on religious or political ideologies, survived more often and were better able to adjust to normal life when freed. These groups appeared to provide what Cohen and Taylor (1978) refer to as 'identity sites' - that is, sites or sources from which social support would or could be forthcoming. Fritz and Marks (1954), in studying the victims and survivors of natural disasters, discovered that there was a higher rate of trauma amongst those who were separated from their families (ie.

their support network), during the event. Similarly, combat units that have a high morale and a high degree of supportiveness amongst one another are those that suffer a lower incidence of disabling psychological conditions (Glass, 1953).

Other lines of evidence supporting the positive effects of social support on health derive from research on the relationship between social support and mortality, on the relationship between life event stress, social support and health and on the relationship between work stress, social support and health.

SOCIAL SUPPORT AND MORTALITY

Numerous studies have noted a powerful association between social support and mortality (See Berkman and Syme, 1979; Blazer, 1982; Carter and Glick, 1970 and Maddison and Walker, 1967). The most well cited of these was the study carried out by Berkman and Syme (1979). This study was a longitudinal examination in which subjects were studied in terms of the presence or absence of social support in their lives and the extent to which these supportive others would reduce the likelihood of death. Results indicated that those with no social ties were far more likely to die than those with social ties. However, only *quantity* and not *quality* of social support was examined. According to House (1981), if this aspect was examined an even greater distinction could possibly have been made between those with good social ties as opposed to those with existing but nevertheless, poor social ties. Thus, failure to assess this aspect of social support relationships brought to the attention of researchers that such assessment could allow for greater precision when attempting to demonstrate social support effects. In subsequent research, the need to assess the quality of relationships did, in fact, become an important issue (See Tardy, 1985; O'Reilly, 1988).

In the definition of social support offered by Gentry and Kobasa (1984) the importance of the quality of social support is emphasised when support is referred to as a psychological resource that defines the perceptions of an individual in terms of the *quality* of his or her interpersonal relationships.

SOCIAL SUPPORT AND LIFE EVENT STRESS

With regard to the research on the relationship between life event stress, social support and health, further evidence of social support's positive effects on stress and health were provided. Life events that were considered to be stressful in that they required a considerable amount of adaptation were those of marriage, birth, divorce, death of a loved one/significant other, suffering a debilitating illness, changes in living and working conditions and deterioration of or stressful relationships with significant others in one's life (Chalmers, 1981; Holmes and Rahe,

1967). When such life events were studied in relationship to social support it was found that support could interact with negative life stress, helping to moderate and reduce the negative impact of such stress on individual health and well-being (Antonovsky, 1979; Cobb, 1976; Dohrenwend and Dohrenwend, 1978; Kulik and Mahler, 1989; Ladewig, McGee and Newell, 1990; Lazarus, 1981; Nuckolls, 1972; Rabkin and Streuning, 1976).

SOCIAL SUPPORT AND WORK STRESS

Additional research evidence for the relationship between social support, stress and health was provided by research carried out in the field of work stress. Research that examined the role of social support in the relationship between organisational stress and strain was, to some extent, an extension of the work on life event stress, social support and health; although in this instance, stressful events examined pertained to those that occurred in the work environment.

In reviewing organizational sociology and psychology over the past fifty years, a slight conceptual shift revealed that social support had been a basic idea and prevalent underlying theme in both management education and practice for much of this century. The 'Human Relations' tradition of organisational research (Mayo, 1933; Likert, 1961; 1967) was founded on the assumption that happy, satisfied, psychologically well people will make the most effective workers. In addition it was assumed that supportive behaviour by work supervisors could improve both the morale and productivity of workers and reduce many forms of occupational stress. It was also found that social support from co-workers could have stress reducing effects (Katz & Kahn, 1960). Seashore (1954) found similar results, demonstrating that as group cohesiveness increased, anxiety over work-related matters decreased. Kahn, Wolfe, Quinn, Snoek and Rosenthal (1964), in their pioneering work on role conflict and role ambiguity, suggested that the quality of interpersonal relations or "social climate" - an important situational variable in the workplace - could have a moderating effect on the individual's responses to these role stressors.

Research that has focused more specifically on social support per se and its effects on organisational stress and strain has been a more recent phenomenon. Researchers have examined the effects of social support within a wide variety of stress-strain relationships, including the relationships between job stressors such as role conflict, role ambiguity and role overload/underload and strains such as job dissatisfaction, job related tension and anxiety and increased intention to leave one's job (Abdel-Halim, 1982; Caplan, Cobb, French, Harrison and Pinneau, 1975; Cobb, 1976; French, Rogers and Cobb, 1974; Jayartayne and Chess, 1984; House and Rizzo, 1972; Johnson and Stinson, 1975; Kahn, Wolfe, Quinn, Snoek and Rosenthal, 1964; Karasek, Triantis and Chaudry, 1981; La Rocco, House and French, 1980,

Marcelissen, Winnubst, Buunk and Wolff, 1988; McIntosh, 1991; Rizzo, House and Lirtzman, 1970; Ross, Altmaier and Russel, 1989).

For example, in 1975 Caplan *et al.*, analysed a sample of 2010 men in 23 occupations and studied the relationships between stressors such as work overload, role ambiguity, role conflict, lack of participation and underutilisation and psychological strains. The results showed perceived support from supervisors, subordinates and coworkers to be negatively correlated with these stressors and strains.

In the study carried out by Abdel-Halim (1982), consistent moderating effects were reported in the relationship between role conflict and role ambiguity, social support from supervisors and job satisfaction and job involvement.

In 1984 Jayaratyne and Chess found that high levels of social support from supervisors was significantly related to high job satisfaction and low anxiety, depression, exhaustion and depersonalization and low levels of role ambiguity and role conflict, corroborating the main effect of social support on stress and health.

La Rocco, House and French (1980) found that social support had a main effect on both job satisfaction and self-esteem and that social support moderated the relationship between anxiety, depression, irritation and somatic symptoms.

Karasek *et al.* (1981) reported evidence of both main and moderating social support effects in the relationship between job demands and job dissatisfaction, depressed mood and absenteeism.

Winnubst, Marcelissen and Kleber (1982) measured the relationship between a number of work stressors, social support and physiological, psychological and behavioural strains. Stressors that were examined were role conflict, role ambiguity, role overload, future uncertainty about the job and responsibility for persons. Sources of social support were the supervisor and coworker. Strains that were examined were psychological strains of irritation, depression, anxiety and threat, behavioural strains of smoking and drinking and physiological strains of heart complaints, general somatic complaints, systolic blood pressure, diastolic blood pressure, level of cholesterol and the degree to which individuals were overweight. Results showed strong main effects of supervisor social support on role conflict, role overload, role ambiguity and future job uncertainty. A slightly weaker pattern of main effects was reported between coworker support and the same stressors and supervisor support and responsibility

for persons. Supervisor and coworker support also had a main effect on psychological strains of irritation, depression and anxiety. In terms of moderating effects, supervisor social support moderated the relationships between role conflict and threat and irritation and role overload and threat. Coworker support moderated the relationship between future job uncertainty and depression, anxiety and excessive smoking.

In the study carried out by Marcelissen *et al.*, (1988) we[illegible]ated sources of social support were shown to reduce role ambiguity, overload, conflict and job future uncertainty. McIntosh (1991), in a study of nurses, demonstrated that support reduced perceptions of workload, negative physical symptoms of stress and emotional exhaustion. In addition, support moderated the relationship between workload and exhaustion.

SUMMARY/CONCLUSION

As can be seen from the above review of the literature, there is a tremendous amount of research, conducted across a broad range of settings, that provide evidence that social support can indeed have a positive effect on individual health and well-being.

Yet, while research findings such as these generally provided a strong case for the positive moderating and main effects of social support within particular stress-strain relationships, they did not comprise the full research picture. That is, not all of the findings in social support research have described such favourable results.

According to recent reviews of empirical evidence compiled within the last two decades, it seems that social support has had inconsistent effects on health, if any effects at all (Cohen, 1988; Ganster and Victor, 1988; House, Umberson and Landis, 1988; Schwarzer and Leppin, 1989b; 1990). Some studies have shown only main effects, others have shown only moderating effects (See Eaton, 1978; Gore, 1978; La Rocco and Jones, 1978; Sandler, 1980; Wilcox, 1981) while others still, have illustrated neither of these two effects (See Andrews, Tennant, Hewson and Vaillant, 1978; Gad and Johnson, 1980; Lin, Simeone, Ensel & Kuo, 1979). In fact, in certain situations social support can have the reverse effect, in that it is perceived of in a negative way, exacerbating stress-strain relationships (Goldstein, 1960; Kaufmann and Beehr, 1989; Marcelissen *et al.*, 1988; Winnubst *et al.*, 1982). For example Winnubst *et al.* (1982) found that people with high responsibility experience far more depression and smoke more cigarettes when their colleagues or supervisors try to help them.

The equivocal nature of these research findings has been attributed to a number of theoretical and methodological problems. The considerable heterogeneity of existing theoretical

formulations, the lack of conceptual specificity, and the use of psychometrically unsound measuring instruments which have evolved from the differing concepts of social support, can all have led to the production of such diverse results (Schwarzer and Leppin, 1990). Below follows a detailed discussion of these problems.

THEORETICAL AND METHODOLOGICAL PROBLEMS IN SOCIAL SUPPORT RESEARCH:

THE ISSUE OF CONCEPTUALISATION AND MEASUREMENT

Problems of conceptualisation and operationalisation are illustrated in the failure of researchers to agree on how social support should be conceptualised. Conceptual diversity is reflected in the enormous array of instruments purporting to measure social support. Such measures include scales concerned with assessing a subject's confidantes and acquaintances; the availability of helpful others in coping with work, family, and financial problems; interpersonal assets and liabilities; individual level of functioning in the community and perceived availability and adequacy of support (Miller and Ingham, 1976; Medalie and Goldbourt 1976; Luborsky, 1973; Renne, 1974; Henderson, 1980). Usage of such scales, with their possibly imprecise conceptualisation of the concept they are attempting to measure, may result in questionable, possibly invalid operationalisations where factors unrelated to the interpersonal involvements of social support are measured (Depner, Wethington and Ingersoll-Dayton, 1984). According to Thoits (1982) if one wishes to engage in a serious effort to assess social support through usage of a social support measure, a prerequisite is that the scale used is explicit and precise in defining the concept it is measuring. Depner *et al.* (1984) state that "a study must begin with a clearly articulated theory" (p.38). In the context of this statement the task of the researcher is to use theory to develop a precise measurement of social support and other variables in the stress process, and to guide selection of the design and analysis strategies that offer the best test of the hypothesised process. When conceptualisation is vague these methodological steps become arbitrary. Rather than expressing theory, the methodology inadvertently moulds it (Depner *et al.*, 1984).

THE ISSUE OF SPECIFICITY

Another problem identified within the social support literature is the failure of researchers to address the issue of specificity. The notion of specificity germinated with House (1981) who, as mentioned earlier, urged researchers to ask questions as to what type of support would be most appropriate for which recipients, from which sources and in which situations. This notion

culminated in the **'Theory of Specificity'** as defined by Cohen and Mackay (1984). According to this theory there are two requirements for specificity:
First, measures must distinguish between types and sources of social support, and,
Second, these types and sources must be matched with regard to their proposed effectiveness as moderators of specific stress-strain relationships (Cohen and Mackay, 1984).

As much of the early work on social support treated the concept as a unitary factor, these specificity requirements were largely ignored. This in turn, resulted in researchers ignoring social support's complexity and neglecting to analyze its constituent parts. However, with the advent of the theory of specificity, the approach has become progressively more discriminating. Recent efforts have been towards a more carefully defined concept of social support, greatly systematized forms of measurement, and a more developed conceptual model of the relationship between support and well-being (Vaux, 1988a; Vaux 1990). There is also a current trend towards differentiating types and sources of support *and* stressors and establishing which would be the *best fit* between which types and sources of support and which types of stressor-strain relationships (Barling, 1990; Cohen and Mackay, 1984; Cohen and Wills, 1985; Cutrona, 1990; Cutrona and Russel, 1989; Cutrona, Cohen and Igram, 1990; House, 1981; House, Umberson and Landis, 1988; Sarason, Sarason and Pierce, 1990; Schaefer, Coyne and Lazarus, 1981; Silver and Wortman, 1980; Tetrick and La Rocco, 1987; Thoits, 1982; Wortman, 1984).

Tardy (1985) and O'Reilly (1988) describe a number of critical issues that need to be recognised and discussed by researchers and that need to be incorporated into measuring instruments, in order to arrive at a *clearer conceptual* and *more specific* understanding of social support. These are as follows:

Specificity of questions - This refers to whether the questions measuring support are constructed for use in general or specific populations. By including sample-specific questions, investigators are able to address issues related to the type and provision of support that are germane to the particular sample under study such as assistance required after a divorce, death of a significant other, birth of a child or assistance required for those experiencing stress at work (O'Reilly, 1988). However, it must be noted that sample-specific questionnaires do reduce the utility of the instrument with regard to its usage on other groups.

In addition specificity requires the determination of issues of content and network, direction, disposition and evaluation of social support (Tardy, 1985).

Content and Network refer to the type of social support available and the amount of providers or sources from whom the social support is forthcoming (Tardy, 1985; O'Reilly, 1988).

Direction refers to the fact that social support can be both given and received. An individual can be a provider of support and/or a recipient of support. Research aimed at developing a measure of social support can investigate either or both aspects.

Disposition refers to the availability and enactment of social support. In turn, support availability refers to the quantity and quality of support to which people have access, while support enactment refers to the actual utilisation of these support resources. Thus, disposition entails a describing of the support available and an evaluation of support. The latter refers to the determination of the recipient's satisfaction or dissatisfaction with the social support available to him/her.

As both the stress process and the extent to which social support acts as a moderator are partly determined by the individual's cognitive appraisal of environmental conditions, one of which is social support, determining evaluation is an issue of vital importance. Many discussions of social support have, in fact, centred on the notion that it is the perception or belief about support that counts as opposed to simply the availability of support, with regard to the effect that support has in influencing individual appraisal and the coping process (Barrera and Baca, 1990; Coyne and Bolger, 1990).

According to McIntosh (1991) while it is important to assess types of support and sources of support with regard to their appropriateness within specific stress-strain situations, one also needs to assess "properties" of support. Properties of support refer to the 'number' of providers, the 'amount' of support available (which Tardy refers to as network and availability, respectively), and the 'adequacy' of the support available. Perceived support adequacy is defined as the amount of support available compared to the amount needed or desired. Such a definition implies that, in order for there to be perceived adequacy there must be a "fit" between the amount and type of support received from a number of providers and the amount or type of support an individual desires or needs, which may vary from person to person (McIntosh, 1991; O'Reilly, 1988). Assessment of the first two properties is thus not sufficient. Numerous providers offering large amounts of support does not automatically imply that this is what respondents want or need. It thus remains crucial to assess all three properties in order to determine if a fit does exist between what is available and what is needed, and if there is a poor fit, what effect this has on individual's ability to cope effectively with stress.

This need for specificity with regard to type, source and perceived adequacy of support was indicated by the results of early research on social support (Caplan, Cobb, French, Harrison and Pinneau, 1975; Cobb and Kasl, 1979; Gore, 1978; House and Wells, 1977).

For example, Cobb and Kasl (1979) and Gore (1978) examined the effects of social support on stress and health in workers who were about to lose their jobs due to closure of the plant where they were working. The study was carried out over a two year period beginning six weeks prior to closure and ending 24 months after closure. The important stressor in this study turned out to be not so much the loss of job, but rather the period of unemployment thereafter. Results of the study indicated that the experience of unemployment had adverse effects only if workers had low social support. In other words, those high on support did not experience, or were protected against such adverse outcome. This effect was evident across a wide range of indicators of work role deprivation and mental health and on selected physiological health variables. However, in terms of *source* of social support, spouse support was the most significant moderating source. House (1981) explains this by saying that in the event of job loss, non-work sources of support would be most crucial as the job loss would have entailed a severe curtailing or total loss of access to work sources of support.

In the study carried out by House and Wells (1977) on the relationship between stress, health and social support, two types of support - emotional support and instrumental support, from four sources - supervisor, coworker, spouse and friends and relatives was assessed. These two types and four sources were examined in relation to five health outcomes and seven indicators of perceived occupational stress. Results revealed that, in terms of main effects, work related sources of support were those that most effectively reduced work stress and (indirectly) improved health. However, supervisor social support was far more effective than coworker social support. In addition, non-work sources appeared to have little effect on these variables. The authors suggested that the greater effectiveness of supervisor support could be attributed to the fact that the organisation of work in the factory tended to isolate workers from one another both physically and socially. Consequently, coworkers were not as important a source of support as supervisors.

In view of the fact that the above study only looked at factory workers, Caplan, Cobb, French, Harrison and Pinneau (1975) set out to study support, stress and health across a series of 23 different occupations. Of 32 possible stress-strain relationships, statistically significant results were exhibited in 23. However, in terms of sources of support, unlike the Cobb and Kasl (1979) study and the House and Wells (1977) study, coworker support emerged as more important than both supervisor and spouse/home support, moderating 60% of all significant

relationships. House (1981) states that this may be due to the fact that occupations under study were those where supervision was minimal and therefore, workers relied more heavily on work peers and colleagues for support.

SUMMARY/CONCLUSION:

What these three studies seem to indicate is that *certain sources* of support are *more effective* than others in terms of main or moderating effects in *certain specific* stress-strain situations and in certain types of jobs. In addition, the studies carried out by Sarnoff and Zimbardo (1961), Mechanic (1962) and Winnubst, Marcelissen and Kleber (1982) (described previously) indicate that *types* of support also have to be considered, with certain types exacerbating negative perceptions of, and responses to, stress in specific stress-strain situations.

Thus, Shinn, Lehmann and Wong (1984) write that "not all interpersonal encounters or their effects are positive. So called supportive significant others in the life of the social support recipient can be sources of conflict. They can strew obstacles in one's path instead of helping one overcome them and/or their well-intentioned efforts can backfire if they do not fit one's situation." (Dunkel-Schetter *et al.* 1984, p.56). Many models of social support have focused primarily on the positive consequences of social interactions. But clearly social support can have negative as well as positive effects on health and well-being, most measures unfortunately failing to assess this negative/positive dimension. Consequently in light of these research findings, House (1981) concluded by saying, "not any and every form of social support will reduce every form of ..... stress or buffer all relationships between stress and health. Indeed, the major task for both future research and application is to specify under what conditions what kinds of social support (from which sources) will have what kinds of effects on stress and health" (p. 83).

The failure of certain studies to demonstrate either one or both of the social support effects may thus be due to a lack of specificity.

These studies may have:

(1) used measuring instruments that did not assess the full range of social support in terms of types and sources;

(2) not matched the right sources or types to the most appropriate stress-strain relationships, and/or

(3) not established the extent to which the recipient is satisfied with the social support he/she perceives him/herself to be receiving within such a situation. (Cutrona, Cohen and Igram, 1990; Cutrona and Russel, 1989; Cutrona, 1990; Schwarzer and Leppin, 1990; Tardy, 1985)

Based on these limitations in the social support research literature and the subsequent recommendations put forward by writers in this field, the focus of the present study was, thus

1) the development of a specific stress-social support-strain model and
2) the development of a social support measure designed to assess such a model.

The development of such a specific stress - social support - strain model and the development of a measure to assess this model was carried out over two phases within the present study.

The development of the social support measure would constitute the first phase of the study (ie phase one), while the testing of a specific stress-social support-strain model would constitute the second phase (ie. phase two).

Below follows a discussion of a number of steps that required completion in order to fulfil these phases. In addition, the rationale for these phases is presented. Thereafter, the hypotheses for the present study are formulated and formally set out.

THE DEVELOPMENT OF A ROBUST, CONCEPTUAL FOUNDATION OF SOCIAL SUPPORT

The *first step* towards carrying out phase one of the present study was to develop a robust conceptual foundation of social support (Sarason, Pierce and Sarason, 1990). According to Depner, Wethington and Ingersoll-Dayton (1984), and O'Reilly (1988), in order for a study to have a robust conceptual foundation it must begin with a clearly articulated theory. The researcher needs to identify what outcomes are of interest, what aspects of social support (in terms of source and type) account for these outcomes and how the process works (Cutrona and Russel, 1989). The researcher must then use this theory to develop a precise measurement of support and other variables in the stress process, guiding selection of the design and analysis strategies that offer the best test of the hypothesised process (Depner *et al.*, 1984).

In reviewing the various conceptual definitions of social support with their assorted terminologies and classification schemes, the taxonomy offered by House (1981) appeared to be the most concise, incorporating and consolidating all of the various elements listed by the other researchers in one or another of the various forms (Cutrona and Russel, 1989; Cutrona, 1990; Winnubst *et al.*, 1988). Not only did House (1981), clearly distinguish between the four types of social support, but he also outlined the numerous sources from whence such support could be forthcoming.

Thus, utilising House's (1981) definition, the present study sought to define distinct hypotheses as to which types of support from which source would best moderate specifically selected stress-strain relationships. In addition, the main effects that these types of support would have on these specifically selected stressors and strains would also be assessed.

While there are numerous sources from which social support could be forthcoming, the present study chose to focus on the source of supervisor social support. The selection of this particular source of support was considered to be appropriate in the light of research findings which indicated that support from this source represents one of the most likely and effective means of alleviating the negative effects of job stress (Abdel-Halim, 1982; Beehr, King and King, 1990; Caplan *et al.*, 1975; Cobb, 1976; French *et al.*, 1974; Kirmeyer and Dougherty, 1988; Winnubst *et al.*, 1982 and Winnubst *et al.*, 1988).

According to Rook (1984) supervisor social support may increase an individual's motivation to deal with stressors and/or it may alter the individual's cognitive analysis of problems faced and of possible solutions. In addition, it may increase the resources needed to deal with problems via the services and material aid implicit in instrumental and informational supervisor social support and/or it may have beneficial affective consequences, such as reducing anxiety and threats to self esteem via emotional or appraisal supervisor social support (Marcelissen, Winnubst, Buunk and Wolff, 1988).

Marcelissen *et al.*, (1988), note that receiving emotional support from one's superiors may lead to workers experiencing a sense of belonging which, in turn, may have a positive effect on well-being. In addition, such support may lead to workers becoming less sensitive to stressors. Appraisal and positive feedback, inherent in appraisal support, may also make it easier for workers to cope with perceived stressors. With regard to role stress, instrumental and informational supervisor social support may be of particular importance. For example, if a supervisor gives a worker information about task requirements, helps to reduce workload by offering material or informational aid and/or gives clear guidance regarding role expectations, he/she can directly reduce the amount of role ambiguity, role overload and role conflict experienced by the worker.

The *second step* towards carrying out the first phase of the present study entailed a close examination of past measurement approaches. This was done in order to identify any problem areas within the measurement domain, which could then be addressed, as were the conceptual problems, within the scope of the present study.

The focus of the following sections will consequently be on the identification of any such problem areas, proposals on how these problems would be addressed in the present study, the methodological steps required by psychological theory to develop a satisfactory social support measure, as well as the statistical validation necessary in such a process.

AN EXAMINATION OF PAST MEASUREMENT APPROACHES

In the past, researchers of social support were concerned mainly with the relationship between stress, social support and health (Coyne and Bolger, 1990; Coyne and Downey, 1991; Sarason, Sarason and Pierce, 1990). As discussed in Chapter 4, two general models of social support were proposed, namely the *main effect model* and the *moderating effect model* (Cohen and Wills, 1985; McIntosh, 1991).

Although both models received some empirical validation, overall results obtained in past research were equivocal (Sandler and Barrerra, 1986). In some studies the main effect of social support on stress and health was observed while in others the moderating effects of social support in the relationship between stress and health was demonstrated. In, yet still, other studies, neither main nor moderating effects of social support were reported while some even showed that social support can have a negative effect on stress and health (See Tardy, 1985).

According to a number of recent social support reviews (Cutrona and Russel, 1989; Payne and Jones, 1987; Sarason, Sarason and Pierce, 1990), the equivocal nature of these research findings emerged partly from the failure of researchers to agree on how social support should be *conceptualised* and *operationalised* - the issue of conceptualisation and operationalisation having direct bearing on the need to establish reliability and validity when developing a measuring instrument.

Leavy's (1983) comments reflected the current Zeitgeist (in Payne and Jones, 1987): "There is currently no assessment instrument which comprehensively measures the central components of social support with acceptable levels of reliability and validity.... Most support questionnaires are *ad hoc* measures with questionable reliability and unknown validity. Obviously progress in understanding the role of social support in relation to stress and disorder is jeopardised if we cannot trust the data that we generate. Reliability problems are also an obstacle to comparing and generalising research findings." (p.16).

Thus, measurement approaches found in the literature appeared to assess distinctly different aspects of social support with little effort being made on the part of test constructors to investigate the relationships between previously developed instruments and how they were conceptualised. This had direct bearing on validity as it appeared that different instruments were to some extent measuring different underlying constructs, all under the aegis of a general rubric of social support (Payne and Jones, 1987).

ADOPTING A MULTI-METHOD APPROACH

Cutrona and Russel (1989), Depner *et al.*, (1984), O'Reilly (1988), Sandler and Barrera (1986) and Tardy (1985) suggest that in order to overcome these problems one needs to adopt a multi-method approach with regard to scale development. Thus, the *third step* towards carrying out the first phase entailed an adoption of this approach. This multi-method approach entailed, along with the already mentioned establishment of a robust conceptual foundation of support and an examination of past measurement approaches, an addressing of the *issue of specificity*.

Depner *et al.* (1984) state that a researcher must begin by forming a thorough conceptual foundation which entails the identification of key constructs and the stating of the nature of their association. That is, the researcher must seek to establish content validity. The formation of such a solid foundation (which can ensure to a large extent, the establishment of such validity), requires that the researcher thoroughly evaluates all previous measures of the concept, incorporating standard measures and procedures with proven reliability and validity into the new measure being developed.

However, in order to achieve an understanding of the *precise dynamics* of a given stressor-social support-strain situation, *specific* conceptualisations of support, *distinctive* to the context of interest, will also need to be introduced into the new measure (O'Reilly, 1988). Thus, there needs to be a balanced trade-off between generalizeability and precision, with the researcher seeking to combine general measures of support that have meaning across a wide variety of situations with items that capture the unique dynamics of support in the specific situation under study (Depner *et al.*, 1984; Payne and Jones, 1987). In this instance, construct validity can be established by ensuring that the new measure does not differ too much from tried and tested previous measures while still differing enough from these previous measures to enable it to capture the uniqueness of the new situation under study (O'Reilly, 1988).

In the present study the aim was thus to examine previously developed measures of social support, all of which had to have acceptable reliabilities and/or validities. This was done in order to obtain a better understanding of previous support measures and attempt to see how readily generalisations across such support measures could be obtained. Such an investigation of previously developed instruments would also enable the identification of those items within the instruments which are most appropriate in terms of representing the domain of social support and most reliable when attempting to measure the construct (Payne and Jones, 1987).

More specifically, scales assessing supervisor social support and scales making distinctions between different types of support were to be examined. The study of such scales would allow for the incorporation of some of their items, (perhaps with slight modifications), into the scale the present study aimed to develop. This would be done if these items were found to be appropriate measures in terms of the above four types of support the present study was trying to assess. Perusal of such scales would also allow for the generating of new ideas on the development of new items. Contexts in which these scales were used were also to be assessed in order to determine whether such measures and the situations to which they were matched had any relevance to the matching of support to specific situations in the present study.

However, in order to capture the unique dynamics of the situation under study in the present research, the issue of 'specificity' still needed to be addressed (See Chapter 4). Cutrona (1990), Cohen and Wills (1985), Vaux (1987; 1990) stress the need to adopt a discriminating approach in social support research, suggesting that failure to do so could be a further reason, (besides that of poor conceptualisation and a failure to examine previous measurement approaches), for the mixed pattern of results obtained in the social support literature. Addressing the specifics of a situation requires that the researcher asks him/herself numerous questions which will, in turn, affect the types of items included and procedures used in the development of a new measure of social support.

Such questions pertain to:

1) *The Direction* of social support. The researcher must establish whether he/she wants to assess the support a subject receives from others and/or the support a subject gives to others (Tardy, 1985).
2) *The Disposition* of social support. The researcher needs to ask whether social support is available to the subject and how the subject perceives this support in terms of quantity and quality. The researcher also needs to establish whether such support is enacted, that is , whether it is utilised or not (O'Reilly, 1988; Tardy, 1985).
3) *The Content* of social support. The researcher needs to ascertain the types of social support available to the individual such as emotional, appraisal, informational and instrumental support (Cutrona and Russel, 1989; House, 1981; Sarason, Sarason and Pierce, 1990; Vaux, 1987).
4) *The Network* of social support. The researcher needs to ask who are the sources of support - are they friends, family, the spouse, coworkers, supervisors or health care professionals (Cutrona and Russel, 1989; O'Reilly, 1988).
5) *The Matching* of support, stress and strain. The researcher needs to ask in what stress-strain situation would what types of support coming from which sources be the most beneficial in terms of exerting a main or moderating effect (Cutrona and Russel, 1989; Tardy, 1985).

With regard to Question 1), the present study chose to assess the support that a subject receives. While some research has examined the effect that supplying support has on social support providers, the present research was designed to assess the impact of received support on social support recipients. In order to address Question 2), two response formats were to be included in the scale developed in the present study. The one format would be that of "Occurrence" which would assess the extent to which supervisor social support was available to the respondent and/or the extent to which such support was enacted. The second format which would be that of "Satisfaction" which would assess the extent to which subjects were satisfied or dissatisfied with the support they perceived to be available to them and/or the support that they had already received (See Appendix B). In terms of Content and Network of Support, Questions 3) and 4), the present study, as mentioned chose to assess four types of support provided by the respondent's work supervisor, namely, supervisor emotional support, supervisor appraisal support, supervisor informational support, and supervisor instrumental support.

In order to answer question 5), the present study sought to identify, through an examination of previous social support research, in what specific situations of stress and strain the four types of supervisor support would be most beneficial. Through this process of identification, the hypotheses of the present study were formulated. The testing of these hypotheses would, however, constitute the second phase of the present research (See Chapter 6).

FORMULATING THE HYPOTHESES

In addition to the development of a four factor social support measure, the next step in addressing problem issues would be to develop specific hypotheses as to which stressors and which strains it would be most appropriate to match the different types of supervisor social support. In order to develop specific hypotheses on the types of supervisor support that would best moderate specific stress-strain relationships, a review of the stress and social support literature was undertaken (See Chapters 3 and 4). From this review it appeared that certain types of support would be more effective in alleviating the outcomes experienced from exposure to certain stressful situations. Subsequently, three hypotheses were formulated. These hypotheses are outlined below:

THE FORMULATION OF HYPOTHESIS 1

Cohen and Wills (1985) in their argument for specifity (See Chapter 4), posited that appraising of events as stressful often results in feelings of helplessness and loss of self-esteem (Garber and Seligman, 1980). Under these conditions they proposed that it is emotional or esteem support that would counterbalance threats to self-esteem. As it has been demonstrated that role conflict and role ambiguity can have a negative effect on self-esteem (French and Caplan, 1973; La Rocco and Jones, 1978) it was therefore hypothesised that emotional support would moderate the relationship between these selected stressors and self-esteem.

Similarly, appraisal support, described by House (1981) as that which provides one with information relevant to self-evaluation and social comparison, both of which can, in turn, affect self-esteem, would most likely moderate the relationship between role stress and self esteem. The main effect of emotional and appraisal support on self-esteem and the direct effect of role stress on self-esteem would also be assessed.

In addition, it was hypothesised that, due to the reported relationship between self-esteem and psychological well being and between role stress and psychological well-being, (Tholls, 1985), emotional and appraisal support would have a main effect upon psychological well-being. A moderating effect of these two support types in the relationship between role stress and psychological well-being was also hypothesised. The direct effect of role stress upon psychological well-being was also proposed (Ganster *et al.*, 1986; Kaufmann and Beehr, 1989). (See Figure 4.3).

THE FORMULATION OF HYPOTHESIS 2

Cohen and Wills (1985) further suggested that informational support, which helps one reappraise a stressor as benign or suggests appropriate coping responses, could counter lack of control and provide the individual with greater understanding about the stressful situation. That this may be so is illustrated in a study carried out by Terick and La Rocco (1987) where it was demonstrated that the extent to which work situations were understandable, predictable and controllable would moderate the relationship between perceived role stress and job satisfaction. Informational support is described as that which provides the recipient with greater understanding, assisting the recipient in better defining the environmental problem, in countering lack of control and thus in enhancing predictability (Cohen and Wills, 1985; House, 1981). Therefore, if informational social support can enable an individual to appraise a stressor as being more benign and suggest more appropriate coping responses which may make the situation at work more controllable and predictable, it is hypothesised that this type of support will then be able to moderate the relationship between role stress and job satisfaction. As a negative relationship has been described between job satisfaction and propensity to leave one's job, (Schaubroeck *et al.*, 1989; Steers and Porter, 1983), propensity to leave was also included as a strain whose relationship with role stress could be moderated by informational support. The main effect of informational support on job satisfaction and propensity to leave and the main effect of role stress on job satisfaction and propensity to leave would also be assessed (See Figure 4.3).

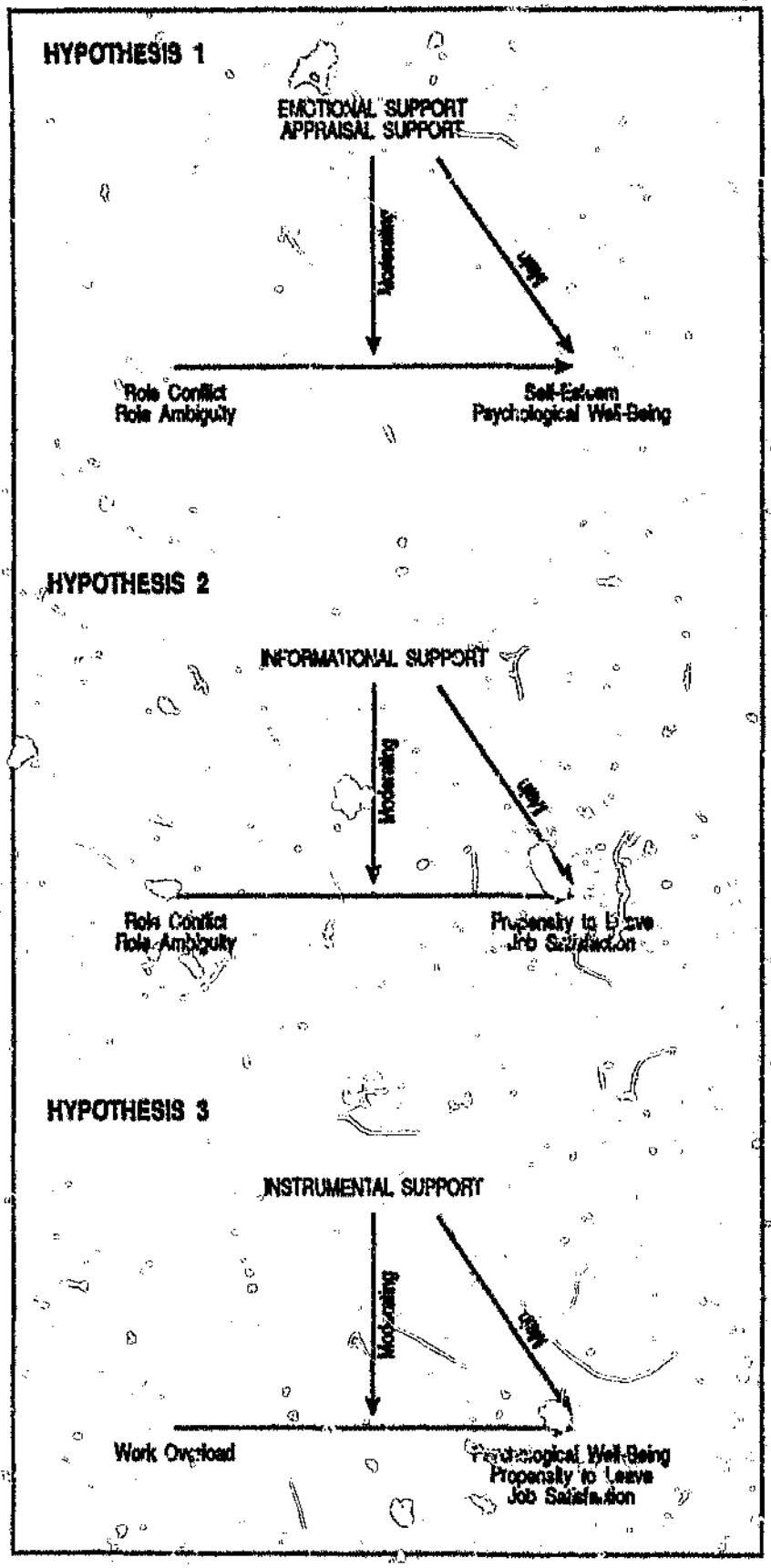

FIGURE 4.3 The Hypotheses

(Adapted from House, 1981).

THE FORMULATION OF HYPOTHESIS 3

Finally, it was hypothesised that instrumental support which provides one with needed helping services, would moderate the relationship between work overload and job satisfaction, psychological well-being and propensity to leave one's job. This hypothesis was derived on the basis of research evidence which indicates that instrumental support is expected to operate as a buffer only when it is closely matched to a particular stressful event (Cohen and Wills, 1985; Cutrona and Russel, 1989).

Research carried out by Paykel (1980) has suggested that instrumental support can buffer the relationship between increased workload and responsibility and depressive symptoms. In turn, work overload has been shown to have a negative impact on job satisfaction and psychological well-being (French and Caplan, 1973) with a link between the former and propensity to stay in one's job having also been demonstrated (Steers and Porter, 1983). Consequently, it was hypothesised that instrumental social support would moderate the relationship between work overload and job satisfaction, psychological well being and propensity to leave one's job. Instrumental support's main effect on the above described dependent variables, as well as the main effect of role stress upon these dependant variables, would also be examined (See Figure 4.3).

SUMMARY/CONCLUSION:

The previous section has, so far, been devoted to outlining the aims of the present study. In addition, conceptual and methodological problems in past social support research and measurement have been discussed. In order to remedy these problems a multi-method approach has been adopted. Guidelines suggested by this approach and the means by which these guidelines will be implemented have been set out. Hypotheses with regard to social support and its effect on specific stress-strain situations have also been formulated. However, before going on to test these specific hypotheses, the four factor supervisor social support scale had to be developed. The following chapter is devoted to general theoretical and methodological considerations required by psychological theory with regards to scale development. The procedures whereby these considerations were adopted in the present study will then be outlined, followed by results obtained through the adoption of such procedures.

CHAPTER FIVE - THEORETICAL AND METHODOLOGICAL CONSIDERATIONS OF SCALE DEVELOPMENT AND PROCEDURES USED IN THE PRESENT STUDY

Psychological theory requires that measuring instruments developed and used embrace two essential characteristics in order that significant explanations about the nature of empirical data be derived. These are *Validity* and *Reliability* (Anastasi, 1982; Kerlinger, 1966). A detailed discussion of these two scale development characteristics follows below:

VALIDITY

The validity of a measure is defined in terms of its ability to reflect the underlying attribute of interest, that is, the extent to which it measures the characteristics or dimensions that it was designed to measure (Anastasi, 1982; Christensen, 1985). Procedures used for determining the validity of an instrument are **Content Validity, Face Validity, Construct Validity** and **Criterion Related Validity** (Nunns and Kruger, 1986).

Content Validity is the first step in the validation process of a measuring instrument. It refers to the extent to which individual items within the instrument are appropriate to the theoretical construct being investigated. It also refers to the extent to which such items adequately sample the theoretical construct under investigation.

Face Validity refers to the subjective judgement made by individuals on whom the measure is administered (and those administering or interpreting the measure), regarding their feelings about the appropriateness of the measure. Such validity needs to be established in order to ensure the co-operation of the participants in the study (Anastasi, 1982).

Construct Validity refers to the extent to which a measure actually measures the theoretical construct or trait under consideration. A number of techniques such as the establishment of *Convergent* and/or *Discriminant* validity and the use of *Factor Analysis* can be used to demonstrate construct validity.

Convergent validity is achieved by demonstrating the relationship of the measure being validated to other independent measures or indices of the same trait (Anastasi, 1982).
Discriminant validity is achieved by demonstrating that the measure being validated is not

related to those measures or indices from which it is expected to differ (Walsh and Betz, 1984). Factor analysis, as a means of assessing construct validity, is used to achieve the identification of the psychological traits within the measure being validated. It can be used in either an exploratory capacity to determine the minimum number of hypothetical constructs that can account for observed covariation, or it can be used in a confirmatory capacity to confirm the nature of the structure which is hypothesised in advance (Kim and Mueller, 1986).

Criterion Related Validity refers to the effectiveness of the measure in predicting an individual's behaviour in a specific stipulated setting (Kerlinger, 1981). The criterion, also known as the external indicator, represents the behaviour under investigation. The score obtained by the measure, also known as the predictor, is used to predict performance on the criterion (Walsh and Betz, 1984).

There are two types of criterion related validity, namely, *Predictive Validity* and *Concurrent Validity*. What distinguishes the two is the element of time. Predictive validity is studied when the criterion is measured some time after scores are obtained on the predictor. The area of interest involves how the present score on the measure predicts future behaviour on the criterion variable. Concurrent validity is studied when both predictor and criterion scores are collected at the same time. The area of interest here is the relationship between present score and present behaviour on the criterion. Use of either type of validity depends on the objective of the measure. If the objective is a matter of diagnosis then concurrent validation must be employed. If the objective is prediction, then predictive validity must be used (Ballantine, 1987).

RELIABILITY

The reliability of a measure is defined in terms of its consistency, accuracy, dependability, stability, precision and freedom from measurement error (Anastasi, 1982). Reliability is a necessary but insufficient precondition for validity and is concerned with the intrinsic psychometric qualities of a measuring instrument while validity refers to the extent to which a measuring instrument measures what it is designed to measure (Kerlinger, 1981).

As a concept, reliability refers to the consistency of scores obtained by an individual when re-examined with the same measure on different occasions, or with a different set of equivalent items, or under other variable examining conditions (Anastasi, 1982). Consistency between scores is expressed by the correlation coefficient which indicates the degree of correspondence or relationship between two sets of scores. Statistically, reliability describes the measure of true variance to total variance obtained by a measuring instrument. That is, it

indicates the extent to which differences in scores of a measure are attributable to true difference in the characteristic under consideration and the extent to which they are attributable to chance errors (Anastasi, 1982).

There are a number of procedures used for estimating the Reliability of an instrument, namely, **Test-Retest Reliability, Split-Half Reliability, Kuder-Richardson Inter-item Consistency** and **Inter-rater** or **Inter-scorer Reliability** (Anastasi, 1982; Kerlinger, 1986). These are discussed below.

Test-Retest Reliability, also referred to as *Temporal Reliability*, describes the application of the same measure to the same sample of individuals on two separate occasions (Nunns and Kruger, 1986). The reliability coefficient is expressed by the correlation of the scores obtained between the two applications while error variance corresponds to the random fluctuations of performance from one testing session to the other. When using this approach it is important to indicate the interval between two applications. The longer the interval the more likely it becomes that scores may be affected by intervening variables such as maturation, education, training or therapy. If the interval is too short, the likelihood that memory effects will occur, whereby the individual remembers and gives the same answers he/she gave on the first administration, are much more likely (Christensen, 1985). However, no specific intervals for retesting exists (Odesnik, 1988). Anastasi (1982) writes that the length of time should neither be too immediate nor should it exceed six months. Previous researchers have found a six to eight week time period between applications to be appropriate (Bluer and Barling, 1987; Odesnik, 1988).

Alternate-Form Reliability refers to the administration of two parallel instruments on two separate occasions - one form being administered on the first occasion and the other form being administered on the second occasion (Nunns and Kruger, 1986). Alternate-Form Reliability assumes that any given trait may be sampled several times using different test items. It measures stability over time and consistency of responses to different item samples, avoiding the difficulties associated with test-retest reliability as memory effects are to a large extent, precluded. Crucial to this procedure is *content sampling*, where care is taken to ensure that the two forms are truly uniform in terms of items covering the same content area, the same range of difficulty, the same number of items in each application, items in each application expressed in the same form, and the same administration of both forms (Anastasi, 1982). If the two forms are administered at the same time, reliability measures consistency between forms. If there is an interval between the administration of the two forms, then reliability measures consistency over time and form, referred to as *lower bound reliability*.

Split-Half Reliability refers to the administration of only one scale (Anastasi, 1982). In this instance a single test is split in two halves with reliability being expressed by the correlation between the two halves. However, by splitting the scale a reliability estimate for only half the enlistment is obtained (Nunns and Kruger, 1986).

Kuder-Richardson Reliability measures the inter-item consistency of an instrument. The Kuder-Richardson technique requires a single administration of an instrument and assesses the degree of homogeneity of the items. However, it is only appropriate for dichotomous scales and is unsuitable for tests with multi-scored items. In the latter instance, *Cronbach's Alpha* should be used to assess reliability.

Interrater or Interscorer Reliability is obtained by correlating scores given to a subject by independent scorers and is most commonly used when the assessment instrument utilised requires a subjective evaluation on behalf of a scorer of scores obtained by the subject.

SCALE DEVELOPMENT PROCEDURES USED IN THE PRESENT STUDY: THE ADOPTION OF THE ABOVE CONSIDERATIONS IN THE DEVELOPMENT OF A FOUR FACTOR SUPERVISOR SOCIAL SUPPORT SCALE

In the present study a four factor scale of supervisor social support was designed to measure the relationship between specific stress-support-strain situations within South African organisations. Towards this end, a rigorous methodology was employed which aimed to ensure that the measure was both reliable and valid, as required by the psychological theory, outlined above. The scale was developed over three distinct steps, namely: *a literature search*, *a pilot test* and *statistical validation testing*. Within these three steps both *quantitative* and *qualitative* research strategies were adopted. The purpose of the literature search, the pilot study and the statistical validation testing was to establish both the validity and reliability of the measure.

Below, (Table 5.1 and Table 5.2), follows diagrammatical representations of the types of validity and reliability established in each of the three scale development steps. In addition, the diagrams also indicate whether the means used to establish such reliability or validity were quantitative or qualitative.

TABLE 5.1 Types of Validity Assessed in Three Scale Development Steps

VALIDITY:	CONTENT VALIDITY	CONSTRUCT VALIDITY	FACE VALIDITY
Literature Search	* Qualitative • Subjective opinion of author	* Qualitative • Subjective opinion of author	--
Pilot Study	* Qualitative • Expert opinion obtained with regard to content	--	Qualitative • Five open-ended questions
Statistical Validation Testing	* Quantitative • Cronbach's Alpha • Item Analysis	* Quantitative • Cronbach's Alpha • Convergent Construct Validity • Factor Analysis	--

TABLE 5.2 Types of Reliability Assessed in Three Scale Development steps

RELIABILITY	TEMPORAL RELIABILITY	INTERNAL RELIABILITY
Literature Search	--	--
Pilot Study	--	--
Statistical Validation Testing	* Quantitative • Pearsons Correlation	* Quantitative • Cronbach's Alpha

STEP 1 - LITERATURE SEARCH

The literature search and the pilot study were conducted in order to establish content, construct and face validity within the scale developed in the present study. Methods used to establish validity within the literature search and the pilot study can be seen to be qualitative while those described in the statistical validation testing (discussed below) can be seen to be quantitative. In order to ensure validity, in both instances, there must be a careful and clear definition of the dimension of interest and items must be chosen and included on the basis that they are typical of an identifiable, clearly defined domain (Kerlinger, 1981). Choice of appropriate items is achieved by reliance on the subjective opinion of the test constructor who thus needs to be fully versed in the literature surrounding the area of interest, having carefully evaluated all previous measures assessing the same or similar type/s of construct/s that

he/she is investigating (Kerlinger, 1981).

Consequently, in the present study an extensive literature search was undertaken in order to establish validity. All available social support literature was examined in an effort to identify the content of social support. In addition, all known questionnaires and scales of social support as well as related variables were scrutinized (See Appendix A). On the basis of information gathered during this initial stage, a draft scale consisting of 33 items was drawn up (See Appendix B). This draft scale was then used in the next step of the study, which was the pilot study.

STEP 2 - PILOT STUDY

The pilot study consisted of two phases. Within the first phase, the draft scale was presented to a group of five experts within the field of Industrial Psychology. The purpose of the presentation of the draft scale to a group of experts was to further establish the content validity of the measure under development. These five experts were provided with House's (1981) definitions of the four types of social support (See Appendix B). Their task was then to classify the type of support represented by each of the items within the 33-item draft scale. On the basis of the subsequent recommendations of these five experts, four items were left out of the scale as they were deemed to exhibit similarity to other items contained within the scale. A further six items were dropped from the scale as it was felt that they were conceptually ambiguous. Thus, within the first phase of the pilot study, the number of items within the scale were reduced to twenty-three. Within the second phase of the pilot study, this 23-item revised form of the draft scale, (See Appendix C), was administered to a group of subjects employed within a South African public utility company.

SAMPLE

The sample consisted of 41 subjects who, as mentioned above, were employed within a large South African public utility company. The age of the participants ranged from 20 years to 60 years (Mean = 36). 39 of the respondents were White (95.1%) and two were Black (4.9%). The home language spoken by 16 participants was English (39%), 23 spoke Afrikaans (56.1%), and two respondents (4.9%) indicated that they spoke an African home language. Years of education ranged from ten years to 15 years (Mean = 11.85). In terms of marital status, five of the respondents were single (12.2%), 29 were married (70.7%), six were divorced (14.6%) and one respondent was widowed (2.4%). The number of children respondents had ranged from zero to five with 20 of the respondents in the sample being males (48.8%) and 21 being females (51.2%).

MEASURING INSTRUMENT

The Scale was presented as a questionnaire. It was entitled "Employee Attitude Questionnaire". A preamble on the front page explained what was required of participants and guaranteed the confidentiality of their responses. Respondents were then required to record their biographical information. The twenty-three items presented thereafter, in the questionnaire, described the relationship between the respondent and his/her supervisor. Of these 23 items, 10 items pertained to the Emotional Support type (Items number 1,5,8,13,14,15,16,18,21,22); five items pertained to the Appraisal Support type (Items number 4,6,9,17,19); five items pertained to the Instrumental Support type (Items number 3,10,11,12,20) and three items pertained to the Informational Support type (Items number 2,7,23). (See Appendix C).

Two response formats, namely "Occurrence" and "Satisfaction", were utilised in order to assess the aspects of the Disposition of social support prescribed by Tardy (1985) and O'Reilly (1988). In order for a measure to assess dispositional aspects it needs to include items that (i) tap the extent to which support is available to a individual (ii) tap the extent to which such support is enacted and (iii) tap the extent to which the individual is satisfied with the support he/she perceives him/herself to be receiving (O'Reilly, 1988; Tardy, 1985). Thus the two response formats, which assessed Occurrence and Satisfaction dimensions asked the questions: *How often does or would this occur?* and *How satisfied are you with this?* (See Appendix C), thereby assessing the dispositional aspects of extent of support availability, enactment and satisfaction. The Occurrence response format could be scored along five points with responses ranging from *'never'* to *'all of the time'*. The Satisfaction response format could be scored along seven points with responses ranging from *'extremely satisfied'* to *'extremely dissatisfied'* (See Appendix C).

After this scale was completed an additional set of five questions were addressed to respondents. These questions asked subjects whether (1) there were any items in the scale that they did not understand, (2) there were any items that they felt were ambiguous, (3) there were any aspects of their relationship with their supervisor that they felt were not, and should have been, included in the scale, (4) there were any aspects that were included that they felt to be inappropriate and therefore should have been excluded, and (5) there were any items that they felt were sensitive and/or offensive in nature. Responses followed a Yes/No format and subjects were told to elaborate on their answer if they answered 'Yes' to any of the questions (See Appendix C).

The purpose of including these questions was to enhance the understanding of subjects

regarding the scale's items. However, these questions were also included in order to ensure that the scale had an acceptable degree of face validity. As mentioned previously, face validity refers to the subjective judgement made by individuals on whom the measure is administered (and those administering or interpreting the measure), regarding their feelings about the appropriateness of the measure. Such validity needs to be established in order to ensure the cooperation of the participants in the study (Anastasi, 1982). However, within the present study, face validity was only established in terms of the respondents as the administrator and interpreter of the scale was also the author of the scale.

PROCEDURE

Subjects completed the questionnaire in the organisation's training centre. The administrator presented the questionnaire on an overhead projector and subjects were instructed on how to fill in the questionnaire. The confidentiality of their responses and the fact that it was not a test was emphasized and subjects were told to take as much time as they needed to complete the questionnaire. When the questionnaire was completed subjects were told to seal it in an unmarked envelope attached to the questionnaire and to post it in a sealed box provided by the administrator.

RESULTS

Items from the initial scale were to be removed on the basis of the answers given to the five pilot questions. As none of the subjects found any of the items to be ambiguous, inappropriate, sensitive and/or offensive in nature, no items were removed. In addition, no items were added to the scale as no subject listed any aspect of their relationship with their supervisor that they felt was not, and therefore, should have been included in the scale. Thus, on the basis of the pilot study, the final form of the scale consisted of twenty-three items which was then administered to a large sample of 285 subjects in Step 3. This step constituted the statistical validation testing of the **Four Factor Supervisor Social Support Scale**, (contained within the Employee Attitude Questionnaire), whereby the scale was further assessed in terms of its reliability and validity.

STEP 3 - STATISTICAL VALIDATION TESTING

The procedures used in Step 3 - the Statistical Validation Testing, were carried out in order to further assess the extent to which the measure under development was valid as well as reliable. In the statistical validation testing of the present study, Test-retest reliability and Cronbach's alpha were used in order to assess the scale's reliability over time as well as the extent to which items within the scale were consistent with one another. This latter technique,

which is a measure of inter-item consistency is also a quantitative means of assessing content validity in that it establishes the extent to which items within the scale are homogenous and thus measuring the same trait. In addition the validity of the measure was further assessed in Step Three through the establishment of its construct validity.

In the following section, the sample used, the measuring instrument, the procedures, the methods of statistical analyses selected, and the rationale behind their usage are outlined. A discussion of **Item Analysis**, which was also conducted in order to determine whether the inclusion of items within the scale were appropriate, is also outlined in the following section. Such an analyses is a quantitative means for assessing item appropriateness, (ie. content validity), as opposed to the qualitative means used in the literature search and the pilot study. In addition, a discussion of the conducting of a **Pearson Product Moment Correlation** between the Occurrence and Satisfaction dimensions of the social support scale is outlined. This was done in order to determine whether these two sub-scales were mutually exclusive.

SAMPLE

The sample consisted of 285 subjects obtained from a large public utility and a large insurance organisation. Ages of participants ranged between 18 and 64 years (Mean = 29). 198 (69.7%) of the participants were White, 22 (7.7%) were Black, 32 (11.3%) were Asian, and 32 (11.3%) were Coloured. The home language spoken by 183 participants (64.2%) was English, 79 participants (27.7%) spoke Afrikaans, 21 (8.5%) spoke a Black language and two participants (0.7%) indicated that they spoke another home language other than those described above. Years of Education ranged from ten to 16 (Mean = 12). 128 Participants (45.1%) were single, 131 participants (46.1%) were married, 22 (7.7%) were divorced and three (1.1%) were widowed. The number of children participants had ranged from 0 to 5. 86 of the participants (30.2%) were men and 199 (69.8%) were women.

MEASURING INSTRUMENT

The 23-item scale developed in phase one of the pilot study was presented to subjects in Step 3. However, the five questions pertaining to subjects' understanding of the scale items, included in phase two of the pilot study, were excluded, as, based on the results of the second phase of the pilot study, they were no longer deemed to be necessary. In Step 3, the 23-item scale was preceded by instructions and an example response to ensure that respondents were completing the scale correctly.

PROCEDURE

The procedure used in the Statistical Validation Testing was identical to that used in phase two of the Pilot Study. The questionnaire was administered by the author in the training centres of both organisations. However, because of the greater sample size, it was presented to groups of 20 to 30 at a time only, with administration being conducted over a period of one week. On administration, the questionnaire was presented on an overhead projector and the author went through the instructions on how to complete the scale with the respondents. Once again, the confidentiality of their responses and the fact that it was not a test was emphasized. Respondents were also told to take as much time as they needed to complete the questionnaire. On completion of the questionnaire they were then instructed to place it and seal it into the unmarked envelope attached to the questionnaire and to post it in a box provided by the author. As the author was present at each and every administration, a response rate of 100% was achieved.

STATISTICAL ANALYSES

The statistical analyses of the Four Factor Supervisor Social Support Scale involved the conducting of an item analyses in order to assess the appropriateness of including items within the scale. A pearson product moment correlation was also conducted between the two dimensions of the Four Factor Supervisor Social Support Scale, namely the Occurrence dimension and the Satisfaction dimension, in order to assess whether two dimensions were distinct from one another. In addition, the scale was tested for its temporal reliability and its internal consistency reliability. Thereafter, construct validity was assessed through use of the technique of factor analysis and through the establishment of the scale's convergent validity. Below follows a more detailed discussion of each of these statistical procedures:

ITEM ANALYSIS

Item analysis was conducted in order to determine which items were suitable for inclusion in the scale. *First*, item response frequencies were examined. If less than 25% or more than 75% of the sample indicated that an item applied to them, this item would then be excluded. Where less than 25% of the sample endorsed an item, the item was deemed to be adding very little to the variance of the scale, while where more than 75% of the sample endorsed an item, this suggested that the item was not discriminating adequately (Bergman, 1992; Bluen and Barling, 1987).

Second, item selection was conducted by means of factor analysis, also used to assess the dimensionality/constructs of the scale. (A more detailed discussion of factor analysis and its usage in assessing the dimensionality of the scale developed in the present study, follows on

pg. 73). If items recorded a *Measure of Sampling Adequacy* (MSA) of less than 0.5 during the factor analysis, 0.5 being the minimum acceptable level recommended by Kaiser (1970; 1974) in order for data to be considered adequate for factor analysis, these items would not be retained. In addition, *item loadings* obtained in the factor analysis, were inspected. On the basis of these loadings, items would then be retained or excluded. According to Kerlinger (1986), the minimum acceptable level for item loadings is 0.35. In the present study, in order to be more stringent, the minimum acceptable level for item loadings was set at 0.5. Finally, *communality estimates* of scale items, obtained within the factor analysis, were inspected. Any items with a communality estimate of less than 0.2, the minimum acceptable level recommended by Kim and Mueller (1986), were to be excluded from the scale. This cut-off point of 0.2 has been widely used in previous research eg. Ballantine (1988), Bergman (1992) and Fullagar (1986).

TEMPORAL CONSISTENCY

Temporal consistency or test-retest reliability, described previously, indicates the extent to which scores on a scale can be generalised over different occasions, providing a measure of stability over time (Anastasi, 1982). Using this method the same instrument is administered to the same sample of subjects on two different occasions. The reliability coefficient is equal to the intercorrelation of the scores (Anastasi, 1982). This method minimises the possibility that constructs other than those designed to be assessed by the instrument are measured and allows for the sample of items to be held constant over the two testing sessions (Ghiselli, Campbell and Zedeck, 1981). Guidelines for the period of time that should elapse between the two testing sessions suggest that though it is desirable to maximise the interval between applications, the longer the interval the more likely the possibility that intervening variables can effect later scores (Ghiselli *et al.*, 1981). Test-retest periods utilised by South African researchers have consisted of a six to eight week retest interval (Bluen and Barling, 1987; Odesnik, 1988). Consequently, an eight week test-retest period was adopted in the present study.

INTERNAL CONSISTENCY

Internal consistency, which measures the degree of homogeneity of test items, that is, the degree to which items are positively intercorrelated and thus measure the same trait, was evaluated by means of *Cronbach's alpha technique*. As mentioned previously, content validation involves the systematic examination of the test content to determine whether the items are a representative sample of the universe of elements to be measured (Anastasi, 1982; Kerlinger, 1981; Odesnik, 1988). Content validity was built into the scale at the outset by including scale items which were considered to be consistent with the appropriate

theoretical constructs under investigation. The assumption that items were consistent was based on an extensive literature search and consultation with experts. However, both the literature search and the consultation with experts are qualitative methods of establishing content validity, depending to a large extent on the subjective opinions of the experts and the author of the measure. Using Cronbach's alpha to establish internal consistency provid one with a quantitative and more precise means of determining content validity as opposed to the qualitative methods used in the literature search and the pilot study. This technique is a derivative of the *Kuder-Richardson Formula 20* which represents the mean of all split-half coefficients resulting from different splittings of the test (Anastasi, 1982). Such an approach is considered to be appropriate when there is a single administration of the test and when the items are not dichotomously scored. As the present scale's items were scored along two dimensions, with a five point and seven point scoring format respectively, this technique was deemed to be the most suitable. The selected cut-off level of reliability depends on factors such as similarity of items, test length, individual and group differences of the sample and the nature of the research (Anastasi, 1982). McKennel (1970) suggests that an alpha of above .60 is an acceptable level of reliability for the social sciences. Consequently, .60 was adopted as the minimum acceptable alpha level in the present study.

CONSTRUCT VALIDITY

Construct validity refers to the extent to which an instrument measures a particular theoretical construct or trait (Anastasi, 1982). In instances where the main objective is to develop a measure of an attribute or characteristic that is not operationally defined, construct validation involves an assessment of how well the measure developed measures this construct (Cronbach and Meehl, 1955; Ghiselli *et al.*, 1981 in Odesnik, 1988).

Various methods exist to assess the construct validity of an instrument. One method is to establish the extent to which the instrument has internal consistency, described above, as this ensures that the scale measures a single construct or trait (Anastasi, 1982). Another method is to establish convergent or discriminant validity (scale inter-correlation). That is, the extent to which the instrument correlates significantly with conceptually related constructs or the extent to which there is little or no relationship between the instrument and other variables with which it should differ (Anastasi, 1982). A further method is through the use the technique of factor analysis. Factor analysis evaluates the scale's factor structure, indicating the number of underlying constructs measured, as well as the degree to which each construct is measured by individual scale items (Anastasi, 1982; Kerlinger, 1981; Kim and Mueller, 1986). This is demonstrated by measuring individual item loadings on each construct.

In the present study construct validity was assessed by (1) establishing internal consistency (described above), (2) by correlating the scale developed in the present study with other scales which were designed to assess the same or similar constructs (convergent validity), and (3) through the use of factor analytic techniques.

CONVERGENT VALIDITY

In terms of the assessment of convergent construct validity, two other scales were used, namely, Taylor and Bowers (1972) supervisory social support subscale of their Supervisory Leadership Scale and Smith, Kendall and Hulin's (1969) Supervision Scale of the Job Description Index (See Appendix D). A description of these scales, a discussion of their reported reliability and validity, and the rationale for their selection as validating criteria for the Supervisor Social Support Scale is outlined in the following section.

The first validating criterion was the Supervisory Leadership Scale of Taylor and Bowers (1972) which measures a subordinate's perception of leadership effectiveness in terms of four dimensions, namely - support, goal emphasis, work facilitation and interaction facilitation. The scale comprises 13 items of which 3, 3, 4, and 3 items make up the four sub-scales respectively. None of the items are reverse scored and a five point Likert type response format is used. In the present study, only the dimension of supervisory support was used as a validating criteria.

Taylor & Bowers (1972) report satisfactory internal consistency reliability for the supervisory support scale (.94) obtained on a sample of 325 work groups in an oil refinery. The supervisory leadership scale has been extensively used in research (Butler and Jones, 1979; Yunker and Hunt, 1976) and has been shown to be a reliable measure when used on a South African sample (Bluen, 1986). The Supervisory Leadership measure was therefore considered to be psychometrically adequate for inclusion in the present study.

In terms of the way in which social support was defined within the Supervisory Leadership Scale, Bowers and Seashore (1966) define support as the approachability and interest a leader takes in subordinate problems. It appears that they refer to a generalised measure of supervisory support while the Four Factor Supervisor Social Support Scale includes various aspects of supervisory support, namely, emotional, instrumental, informational and appraisal support (House, 1981). It was therefore hypothesised that the four dimensions of the Supervisor Social Support Scale would be significantly and positively related to a generalised measure of supervisory support.

The second validating criterion was satisfaction with supervision, namely, a pleasant or positive emotional state as a result of one's work experience (Locke, 1983). Therefore, satisfaction with supervision reflects the pleasurable or positive emotional state experienced by an employee as a result of supervisory style and influence (Locke, 1983). Numerous researchers have shown that subordinates are more satisfied with supervisors who are considerate, supportive and employee centred (Halpin, 1957; Halpin and Winer, 1957; Likert, 1967; Vroom, 1964). As consideration and supportiveness are clearly aspects of social support that the Four Factor Supervisor Social Support Scale was designed to measure, the satisfaction with supervision subscale of the Job Description Index (Smith, Kendall and Hulin, 1969) was considered to be an appropriate validating criterion.

The Supervision scale of the Job Description Index (Smith *et al.*, 1969) measures the satisfaction individuals experience as a result of the type of supervision received (Cook, Hepworth, Wall and Warr, 1981). It consists of 18 items, 3 of which are reverse scored. The response format "Yes", "Uncertain" and "No" is used for each item with scores of 3, 1 and 0 respectively.

Internal reliability of the scale has been reported by a number of studies using various techniques eg., Spearman-Brown, Coefficient Alpha and Kuder-Richardson formulae. Reliability coefficients range from .61 - .89 (M = .84) for sample sizes ranging from 32 to 622 (M = 208). The Supervision Scale has been administered to white and blue collar workers and to management personnel. Cook *et al.* (1981) report test-retest reliabilities for three studies. A reliability coefficient of .77 was reported over a seven month period for a group of public utility employees; .73 was reported for 68 managers over a twelve month period and .46 and .45 was reported for a group of 541 managers and 306 non-managers over a sixteen month period.

The validity of the Index has been demonstrated by correlating it with conceptually related constructs. Szigali and Sims (1974) found that, for four samples, the supervision scale correlated positively with leaders demonstrating consideration (mean r = .78). The Supervision Scale of the Job Description Index has been administered in numerous studies and has reflected acceptable internal consistency reliability (.88 and .81) when used on a South African Sample (Nunns, 1986). The measure was thus considered to be psychometrically sound and appropriate for inclusion in the present study.

Construct validity was also assessed through the use of factor analytic techniques (Cook and Wall, 1986, Kerlinger, 1981). The factor analytic method, as a means of validating scales, has

been used in the development of a number of measures (Bergman, 1992; Burns and Bluen, 1992; Fullager, 1986, Jans, 1982, Rizzo, House and Lirtzman, 1970, Warr, Cook and Wall, 1979). In the following section a detailed discussion of the procedure is offered.

FACTOR ANALYSIS

Factor analysis was conducted in order to assess the ability of the scale developed in the present study, to measure four presupposed dimensions of social support. Factor analysis is a procedure whereby patterns of correlation between a large number of variables are examined with the main underlying dimensions then being extracted. It is based on the assumption that some underlying factors, which are smaller in number than the number of observed variables, are responsible for the covariation amongst these observed variables. A factor is taken to be a concept with two or more underlying variables, is assumed to represent an area of generalisation which is qualitatively different from that represented by other factors and has a low correlation with, or is uncorrelated with, all other variables within the test battery (Kim and Mueller, 1986).

Factor analysis can be used in either or both an *exploratory* or *confirmatory* manner (Kim and Mueller, 1986). When using exploratory factor analysis one attempts to reduce a set of variables into two or three underlying factors. When using confirmatory factor analysis one attempts to determine whether presupposed underlying characteristics actually exist (Kim and Mueller, 1986). Factor analysis may be calculated through the use of numerous techniques. There are, however, a number of steps common to all of these techniques. These are;

(i) selecting the variables
(ii) computing the matrix of correlation amongst these variables
(iii) extracting the unrotated factors and (iv) interpreting the rotated factor matrix (Kerlinger, 1981).

In the present study **confirmatory factor analysis** using the **principle components method** was conducted. Using this method, intercorrelations are conducted among all items. An initial factor is then extracted which accounts for the most variance in the measure. Thereafter a second factor is created to account for most of the remaining variance with this procedure being repeated until all variances are accounted for (Kim and Mueller, 1986). Since the first factor accounts for the most variance, the factors are then rotated to distribute the variance more evenly among the subsequent factors. Varimax rotation, which is an orthogonal rotation technique is then used in order to identify the sub-constructs. The varimax method has been extensively used in research and the development of scales (Ballantine, 1988; Bergman, 1992; Burns and Bluen, 1992; Child, 1979; Fullager, 1986; Rizzo *et al.*, 1970; Warr *et al.*,

1979). This method was considered to be appropriate since the objective of the study was to interpret the underlying factors and to understand the factor composition of the measure developed.

A number of criteria were adopted for factor extraction, namely, Kaiser's (1970) Measure of Sampling Adequacy, the Scree Test (Catell, 1966), the Kaiser Criterion with regard to eigenvalues, Harman's specification (1976), the Criterion of Substantive importance and factor loadings greater than 0.5. A brief discussion of these criteria follow below:

MEASURE OF SAMPLING ADEQUACY (MSA)

The MSA (Kaiser, 1970) is the procedure whereby the appropriateness of the factor model is assessed. That is, it is a summary of how small the partial correlations are as compared to the ordinary correlations. According to Kim and Mueller (1986), MSA's of 0.8 and above are regarded as good to excellent, while those which fall below 0.5 are regarded as unacceptable.

THE SCREE TEST

The scree test, advocated by Catell (1966) directs one to examine the graph of eigenvalues and to stop factoring at the point where the eigenvalues (or characteristic roots) begin to form a straight line with an almost horizontal slope. Such a method is regarded as a robust means of identifying only the major common factors where there are minor factors evidenced (Kim and Mueller, 1986).

EIGENVALUE SPECIFICATION

The eigenvalue specification (Kaiser, 1974) is one of the most popular criteria for addressing the number of factors in question, with factors having an eigenvalue of greater than 1 being retained when the correlational (not adjusted) matrix is decomposed (Kim and Mueller, 1986). Eigenvalues are the roots derived from the solution of the simultaneous linear equations computed during principal factor extraction. The sum of all eigenvalues is equal to the number of variables in the factor analysis. Consequently, if the first eigenvalue is divided by the number of variables, the proportion of variance explained by a given axis or factor is obtained (Kim and Mueller, 1986). An eigenvalue of greater than +1 indicates that the correlation between variables is greater than, or equal to, zero. That is, the correlation is less than or equal to perfect. The largest eigenvalue represents the amount of variance explained by the principal factor, the second largest eigenvalue represents the amount of variance explained by the second factor, and so on (Kim and Mueller, 1986). The eigenvalue criterion also requires that communalities are inspected, with the requirement being that communality estimates for each individual item or factor must be greater than 0.2 (Kim and Mueller, 1986).

Thus, the Kaiser Criterion (Kaiser, 197), by establishing a criterion of eigenvalues greater then +1, provides a lower limit for the extraction of statistically viable common factors (Kim and Mueller, 1986).

THE HARMAN CRITERION

According to Harman (1976), the extraction of factors should be halted before the cumulative sum of eigenvalues exceeds the sum of the estimated communalities, where communality is defined as the sum of the squares of the common-factor coefficients (Kim and Mueller, 1986).

THE CRITERION OF SUBSTANTIVE IMPORTANCE

The criterion of substantive importance refers to the minimum contribution by a factor in order for it to be considered substantively significant (Kim and Mueller, 1986). The criterion focuses on the proportion of total variance to be explained by the last factor to be retained. The criterion is subjective and is set at whatever level is considered to be substantively important. Some possibilities suggested by Kim and Mueller (1986) are one percent, five percent or ten percent. In the present study the one percent level was selected. thus the last factor retained had to account for more than 1% of the proportion of total variance (Kim and Mueller, 1986). Though this method is subjective, its advantage lies in its ease of interpretation. In addition, as it is used in conjunction with the more objective criteria described above, its usage in the present study was not considered to be problematic.

SUMMARY:

The above section has been devoted to describing the statistical procedures used in the present study to determine the extent to which the Four Factor Supervisor Social Scale is both reliable and valid. Procedures described have been that of Item Analysis, Pearson Correlations, Test-retest Reliability, Internal Consistency, Convergent Validity and Factor Analysis. Item analysis entailed an inspection of response frequencies, measures of sampling adequacy, item loadings and communality estimates. A pearson correlation was conducted between the Occurrence and Satisfaction dimensions of the Four Factor Supervisor Social Support Scale to determine if these two dimensions were, in fact, mutually exclusive. Test-retest reliability entailed the administration of the 23-item Four Factor Supervisor Social Support Scale to a group of subjects with an eight week interval between administrations. Internal consistency was determined through the use of Cronbach's alpha technique. Convergent validity was determined by correlating the Four Factor Supervisor Social Support Scale to two other measures, namely, Taylor and Bowers' (1972) supervisory social support sub-scale of the Supervisory Leadership Scale and Smith, Kendall and Hulin's (1969) supervision scale of the Job Description Index. Construct validity was established through the

use of confirmatory principal components factor analysis. The criteria adopted for factor extraction were the measure of sampling adequacy, the scree test, the eigenvalue specification, the Harman criterion, and the criterion of substantive importance. Below follows the results obtained from the utilization of these procedures.

RESULTS

ITEM ANALYSES

On the basis of the inspection of response frequencies no items were excluded. This was so as no item had more than 75% or less than 25% of the sample indicate that an item applied to them. In addition, no items were excluded on the basis of measures of sampling adequacy as all items recorded an MSA of greater than 0.5. The over-all MSA for the twenty three items was 0.95 (range 0.90 - 0.97). This not only indicates that no items need to be excluded on the basis of their MSA's, but also indicates that the data are adequate for factor analysis (Kim and Mueller, 1986) (See Table 5.3).

With regard to the inspection of item loadings, one item, namely item number six, was excluded. This was due to the fact that this particular item was loading on all of the factors retained by the mineigen criterion, at less than 0.5. Communality estimates of the remaining twenty-two items exceeded the minimum acceptable level of 0.2 (Fullager, 1986). The total communality estimate reported was 15.43 (range .52 - .79). Consequently these remaining items were all retained.

TABLE 5.3 Kaiser's Measure of Sampling Adequacy

ITEM	MSA
1	0.95
2	0.96
3	0.90
4	0.94
5	0.95
6	0.95
7	0.93
8	0.96
9	0.96
10	0.91
11	0.93
12	0.94
13	0.94
14	0.95
15	0.95
16	0.96
17	0.94
18	0.97
19	0.95
20	0.95
21	0.97
22	0.96
23	0.95

PEARSON CORRELATION BETWEEN SATISFACTION/OCCURRENCE DIMENSIONS

A Pearson Product Moment correlation coefficient calculated between the two subscales of the Four Factor Supervisor Social Support scale, namely the Occurrence subscale/dimension and the satisfaction subscale/dimension, was highly significant ($r = .90$, $p < 0.05$), (See Table 5.4), therefore demonstrating that the two dimensions were *not* mutually exclusive. On the basis of this high correlation the dimension of social support satisfaction was dropped in favour of occurrence. The satisfaction dimension was dropped in favour of the occurrence dimension as the way in which items were phrased did not allow for the retention of the former without the latter. That is, syntactically, questions were phrased in such a way that without the occurrence dimension the response format pertaining to the satisfaction dimension did not make semantic sense.

TABLE 5.4 Pearson Correlation Coefficients between the Occurrence and Satisfaction Dimensions of the Four Factor Supervisor Social Support Scale

Dimensions	1.	2.
1. Social Support Occurrence	-	
2. Social Support Satisfaction	.90***	-

*p < .05
**p < .01
***p < .001

RELIABILITY

Internal consistency and **Temporal consistency** were calculated for the scale of supervisor social support occurrence. With regard to internal consistency, Cronbach coefficient alpha was used since a non-dichotomous response format was adopted. An overall alpha coefficient of .94 was reported which was considered to be highly satisfactory (Anastasi, 1982; Rahim, 1983). The reported alphas for the four sub-scales of social support, derived on the basis of the factor analysis (See Factor Analysis results presented below), were emotional support - α = .93; informational support - α = .66; instrumental support - α = .83 and appraisal support - α = .83. All of these alpha levels were above the minimum acceptable level of .60 suggested by Mc Kennel (1970) and were therefore considered to be acceptable.

Temporal consistency was calculated over an eight week interval using the Pearson Product Moment Coefficient ($r = 0.82$, $p < 0.05$, $n = 19$), such a correlation considered to be satisfactory (Bluen and Barling, 1986, Odesnik, 1988). This procedure involved the correlating of the scores obtained by a sub-sample of 19 subjects in the initial testing session with the scores obtained by these subjects in the post-test (Anastasi, 1982).

SAMPLE

The sample consisted of 19 subjects employed in a public utility company. Six (31.6%) of the subjects were male and 13 (68.4%) were female. Age of the subjects ranged from 20 to 60 years (M = 34.3). Level of education of subjects ranged from ten to fifteen years (M = 11.7) and all subjects were White. The number of children subjects had ranged from 0 to 5. Eight of the subjects spoke English (42.1%) and 11 (57.9%) of the subjects spoke Afrikaans. Two of the subjects were single, fourteen were married, three were divorced and one was widowed.

VALIDITY

To determine the scale of supervisor social support's convergent construct validity, scores obtained on this scale were compared with Taylor and Bowers' (1972) supervisory social support subscale and Smith, Kendall and Hulin's Satisfaction with Supervision Index. These three scales were administered to a separate sample of 41 subjects. The Pearson Correlation coefficients reported were 0.71 ($p < 0.001$) and 0.75 ($p < 0.001$) respectively.

SAMPLE

The sample consisted of 41 subjects employed in a public utility company. Sixteen (39.0%) of the subjects were male and 25 (61.0%) were female. Age of the subjects ranged from 23 to 61 years (M = 36.2). Level of education of subjects ranged from ten to fifteen years (M = 13.0) and all subjects were White. The number of children subjects had ranged from 0 to 5. Sixteen of the subjects spoke English (39.0%) and 25 (61.0%) of the subjects spoke Afrikaans. Five of the subjects were single, twenty-seven were married, seven were divorced and two were widowed.

FACTOR ANALYSIS

To further determine the construct validity of the supervisor social support scale the technique of Factor Analysis was utilised. The data from the supervisor social support scale was assessed using Kaiser's (1970) Measure of Sampling Adequacy (MSA) to determine whether the data were appropriate for the common factor model. According to Kaiser (1970), MSA values of 0.8 or 0.9 are regarded to be good, while MSA's below 0.5 are considered unacceptable. Of the twenty two scale items which remained, all had MSA's of above 0.8 (See Table 5.3). An overall MSA of 0.95 was recorded, therefore, indicating that the data was appropriate for factor analysis.

The minimum eigenvalue and Scree tests were used to extract the factors (Fullager, 1986). Only factors extracted with eigenvalues of greater than one were retained. Close examination of the Scree plot of eigenvalues (See Figure 5.2.) indicate that the characteristic roots begin to level off shaping a straight horizontal line after four factors. Harman's Criterion (1976) was reflected against the relevant data and it was found with regard to the item communalities and the eigenvalues, that the extraction of four factors was appropriate. Thus, the sum of the eigenvalues (14.43) was not found to exceed the sum of item communalities (15.43). With regard to the criterion of substantive importance, all four factors accounted for more than 1% of the total variance. Factor one accounted for 48.93% of the total variance, factor two accounted for 6.63% of the total variance, factor three accounted for 5.34% of the total variance, and factor four accounted for 4.69% of the total variance. Consequently, it was

considered appropriate to retain these four factors.

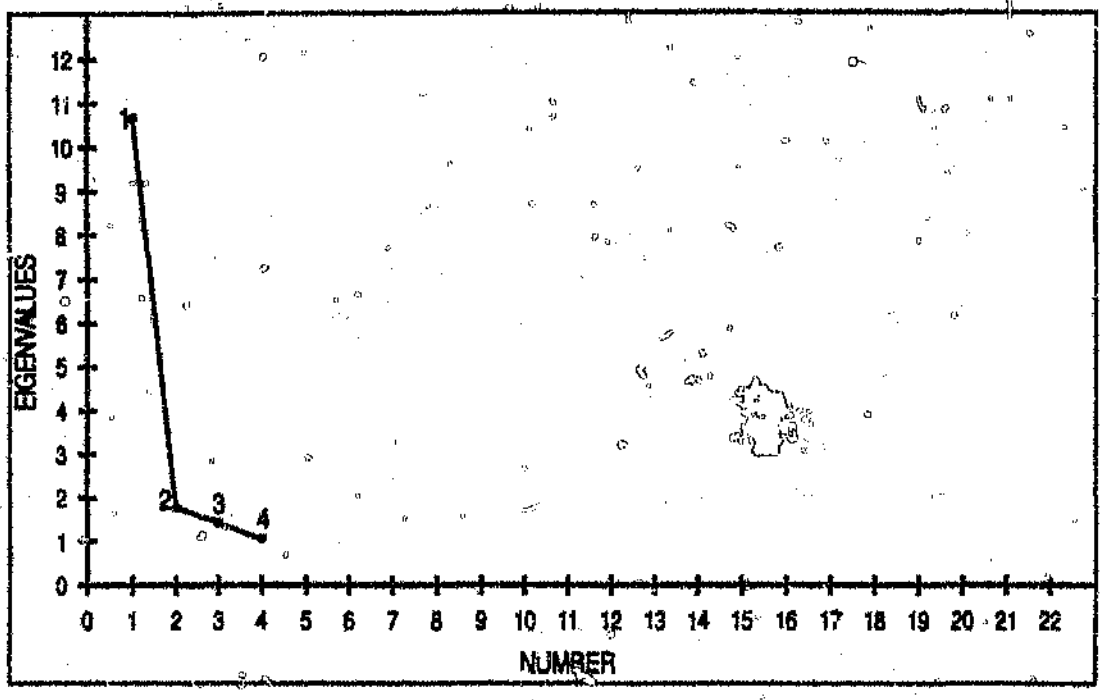

FIGURE 5.2 Scree Plot of Eigenvalues

Varimax rotation revealed that factor one comprised of ten items, all of which pertained to emotional supervisor social support (items number 1, 5, 7, 12, 13, 14, 15, 17, 20, 21). Factor two was comprised of five items, all of which pertained to instrumental supervisor social support (items number 3, 9, 10, 11, 19). Factor three was comprised of four items, all of which pertained to appraisal supervisor social support (items number 4, 8, 16, 18). Factor four was comprised of three items which all pertained to informational supervisor social support (items number 2, 6, 22) (See Table 5.5). Final Communality estimates amongst all twenty two items were greater than 2.0 and were therefore considered to be acceptable (Fullager, 1986). A Pearson product moment correlation conducted between the four subscales, derived on the basis of the above factors, was not very highly correlated, revealing that the four subscales were to some extent, mutually exclusive (See Table 5.6).

TABLE 5.5 Factor Loadings of Supervisor Social Support Scale (22 Items).

Supervisor Social Support Items	Factor Loadings			
	Factor 1	Factor 2	Factor 3	Factor 4
1. Your supervisor is friendly and easy to approach.*	0.62	0.08	-0.1	0.51
2. Your supervisor provides you with all the necessary information to enable you to do a good job.*	0.40	0.29	0.08	0.53
3. Your supervisor helps you get your job done when you encounter difficulties.*	0.19	0.60	-0.04	0.43
4. Your supervisor gives you positive feedback regarding your work.	0.34	0.36	0.57	0.30
5. Your supervisor is interested in what you have to say.	0.59	0.17	0.25	0.36
6. Your supervisor gives you information about future changes at work.	0.07	0.30	0.29	0.65
7. You can turn to your supervisor in times of difficulty.*	0.66	0.17	0.11	0.42
8. Your supervisor says things about your work that boost your self-confidence.*	0.50	0.26	0.54	0.23
9. Your supervisor helps you get your job done when your workload is too heavy.	0.20	0.82	0.11	0.05
10. Your supervisor shows you how to do something at work.	0.19	0.70	0.08	0.31
11. Your supervisor makes an effort to arrange extra help for you when you are under pressure.	0.30	0.69	0.24	-0.00
12. Your supervisor is willing to listen to your work-related problems.	0.74	0.24	0.11	0.12
13. You can trust and talk frankly to your supervisor.	0.77	0.13	0.20	0.26
14. Your supervisor is willing to listen to your personal problems.	0.75	0.20	0.16	0.08
15. Your supervisor provides you with encouragement when you have to do something difficult.	0.64	0.43	0.41	0.13

	Factor 1	Factor 2	Factor 3	Factor 4
16. Your supervisor does not tell you how you are doing as regards you work as he/she assumes that you know this.	0.10	-0.01	0.78	0.14
17. Your supervisor provides you with reassurance when you experience problems regarding your work.*	0.60	0.40	0.37	0.10
18. Your supervisor praises you when you have done something well.*	0.39	0.36	0.63	0.13
19. Your supervisor helps you to develop new ways of doing things at work.*	0.27	0.58	0.44	0.23
20. Your supervisor expresses an interest and concern for your well-being.*	0.65	0.30	0.39	0.09
21. Your supervisor stands by you if you get caught up in a difficult situation at work.	0.61	0.33	0.34	0.17
22. Your supervisor withholds information from you regarding your job.	0.25	0.01	0.32	0.59
Eigenvalues: Proportion of Variance:	10.76 48.93%	1.45 6.63%	1.17 5.34%	1.03 4.69%

* Indicates high off-diagonal loadings on these particular items.

TABLE 5.6 Pearson Correlation Coefficients between the Four Social Support Subscales

Subscales	1	2	3	4
1. Emotional Social Support	-			
2. Informational Social Support	.65***	-		
3. Instrumental Social Support	.67***	.56***	-	
4. Appraisal Social Support	.74***	.58***	.62***	-

*p < .05
**p < .01
***p <.001

DISCUSSION

In the present study a four factor scale for the measurement of supervisor social support was hypothesised. Results of the Factor Analyses, (See Table 5.5), supported this hypothesis, with four factors emerging that clearly corresponded to the four modes of support previously hypothesised. Before embarking into a discussion of the findings revealed by this factor analysis, a brief discussion of the present study's rationale for developing an instrument that could differentiate between more than one factor/mode of social support, needs to be outlined.

The attempt to develop a measure that could distinguish between the different dimensions of social support arose because of the mixed results that had been demonstrated by earlier social support research. Some studies showed support to have a main effect on stress and health, others showed a moderating effect of support in the relationship between stress and health, while others still illustrated neither of these two effects. In fact, in certain instances support was shown to have a negative effect in that it exacerbated the stress-strain relationship (Eaton, 1978; Gore, 1978; La Rocco and Jones, 1978; Sandler, 1980; Wilcox, 1981; Andrews, Tennant, Hewson and Vaillant, 1978; Lin, Simeone, Ensel and Kuo, 1979; Gad and Johnson, 1980; Goldstein, 1980, Winnubst *et al.*, 1982).

Thus, because of these equivocal research findings, the theory of specificity arose (Cohen and Wills, 1985). Postulated by Cohen and Mackay (1984), this theory stated that in order to demonstrate a moderating and/or main effect of social support, the researcher would have to match the right type of support with the coping requirement created by a particular stress event or events. In addition, these types of support would have to be issued from the source of support most appropriate to the specific stress-strain situation (Cutrona and Russel, 1989, Cutrona, 1990). The notion of different types and different sources of social support derived from early conceptualisations of support which proposed that there were numerous types of helping behaviours that could be offered by a variety of support providers to the social support recipient (House, 1981). However these different types of support or helping behaviours existed in theory only and had not as yet been tested empirically (Vaux, Riedel and Stewart, 1987).

Early research had thus used generalised social support measures that, though they may have had items within them that pertained to the different types of support, did not match these different types to the correct coping requirement/s of a specific stress-strain situation. Nor did such measures attempt to identify which source of support provider would be most beneficial

in terms of helping the recipient to cope with the particular stress event or series of events (House and Kahn, 1985; Tetzloff and Barrera, 1987).

Accordingly, the theory of specificity regarded such global measures of social support and stress as inadequate for detecting interactions and main effects that occur at more precise levels of conceptual and statistical analyses. Instead, it was recommended that researchers develop instruments that were more refined, specific and closely matched to the situations of stress and strain that were under study (Payne and Jones, 1987; Tetzloff and Barrera, 1987).

Consequently, on the basis of these recommendations, the present study attempted to develop a four factor measure of supervisor social support choosing to assess the four types proposed by House (1981). The choice of the conceptualisation provided by House (1981) was based on a cross-analyses and reviews of previous conceptualisations (Barrera and Ainlay, 1983; Cutrona and Russel, 1989; Mitchell and Trickett, 1980; Rose, 1986). Within these cross-analyses and reviews, all four social support types proposed by House (1981) were identified, albeit in one or an other form (Winnubst, Marcelissen and Buunk, 1988).
The selection of the work supervisor as the source of support was based on the research literature that provided evidence that suggested that in the type of stress-strain situations under study the supervisor would be the most appropriate source/provider of these different types/helping behaviours (Abdel-Halim, 1982; Beehr, King and King, 1990; Caplan *et al.*, 1975; Cobb, 1976; Cobb and Kasl, 1977; French and Caplan, 1978; French, Rodgers and Cobb, 1974; Gore, 1978; Pinneau, 1976; Winnubst *et al.*, 1982; 1988). This seems to be so as, according to Beehr *et al.* (1990), supervisors, in particular, are very influential members of employees role sets, and as such may represent the most important source of work-site support to employees experiencing specific stressors.

Based on this selection of House's (1981) conceptualisation of support and the supervisor as the source of support, a rigorous methodology was adopted in which care was taken to ensure that items selected for the measure were appropriate in terms of the construct that the scale was trying to assess. This was achieved through the undertaking of an extensive literature review, consultation with experts in the field of industrial psychology and on the basis of a review of previously developed social support scales. In addition, statistical analyses were conducted, in order to insure that the inclusion of items within the scale were appropriate and that the measure was reliable and valid.

Thereafter, the items within the scale were subjected to the statistical technique of confirmatory principal components factor analysis in order to ascertain whether the four presupposed modes

of support were actually evident. According to Gorusch (1983), the utilisation of confirmatory as opposed to exploratory factor factor analyses, is more appropriate when the pattern of factor loadings can be predicted in advance. In order to determine the most appropriate number of factors that should be rotated from any given matrix of inter-item correlations, Walkey (1983) suggests that one rotate either the number of factors that are claimed by the test constructors to be present in the questionnaire, or the number derived theoretically from some other source. Using this procedure, each factor is specified in advance as the sum of the unit-weighted items assumed to compose it. The correlations of all items on each factor are subsequently tested for significance. Hence, data in the present study was subjected to confirmatory factor analyses in order to test the degree to which items designed to assess the four modes of support actually loaded on those four factors (Vaux *et al.*, 1987). This technique revealed that the scale was indeed made up of four factors which corresponded to the four theoretical modes of support each was intended to operationalise: namely, emotional social support, instrumental social support, informational social support and appraisal social support (House, 1981; Vaux, Riedel and Stewart, 1987).

However in terms of the amount of variance accounted for by each factor, the first factor, namely, the emotional support factor, accounted, by far, for the greatest proportion of variance, in comparison to the remaining three factors. Because there has been a considerable amount of debate, evident throughout the literature on social support, as to whether the concept is in fact multidimensional or unidimensional, the following section will be devoted to a close examination of this particular finding with regard to the bearing that it has on this theoretical debate. In addition, other studies in which multidimensional measures of support were developed, will be examined in order to compare their findings with those demonstrated in the present study. These other studies will also be inspected with regard to the bearing that their findings have on the debate between uni- and multidimensionality. Before going on to examine the present studies findings, along with those of other studies', a brief introduction to this debate will follow.

While a number of researchers have argued that social support is indeed a multidimensional concept, there are others who argue against this, proposing that a single type of support constitutes its main ingredient and that this type is that of emotional social support.

According to Sarason, Shearin and Pierce (1987) in their assessment of a variety of measures of perceived available social support, "regardless of the way the instruments attempt to break down the construct (of social support, all of the instruments) generally assess the extent to which an individual is accepted, loved and involved in relationships in which communication

is open - the theoretical implications of such findings emphasising that there is a common single core underlying social support indices" (p.813).

Statistical analyses carried out on a vast majority of scales designed to assess the different components of social support (See Cutrona and Russel 1989) lends weight to this argument. Most of these scales, which contain items pertaining to types of support that are the same or similar to those used in the present study's scale, when using the technique of principal component factor analysis, albeit in an exploratory or confirmatory fashion, were unable to demonstrate more than one factor of social support. Those studies that did identify more than one factor then found that the different subscales/dimensions that were identified were so highly correlated that, in some instances, the correlations were as high as that of the internal consistency of the scale (Cutrona and Russel, 1989).

However, unlike these studies described above, the measure developed in the present study *was* able to demonstrate four factors of support. In addition, the correlations of subscales in the present study were not that high so as to indicate a lack of mutual exclusivity between factors (See Table 5.6). Nevertheless, within the present study, results of the factor analysis *did* reveal that one factor, namely the emotional support factor, was dominent.

As can be seen from Table 5.5, the first factor, namely the Emotional Support Factor, accounted for most of the variance (48.93%), as opposed to the Instrumental, Appraisal and Informational Support Factors, which accounted for 6.63%, 5.34%, and 4.69% of the variance respectively. Eigenvalues reported for these four factors were Emotional support (10.76), Instrumental support (1.45), Appraisal support (1.17) and Informational support (1.03).

The dominance of the Emotional support factor, as revealed by the proportion of variance accounted for and the demonstrated eigenvalues, was, thus, not entirely unexpected in the light of the existing debate on unidimensionality versus multidimensionality. House (1981; 1988), himself, although proposing the existence of four distinct dimensions of social support, namely: Emotional Support, Appraisal Support, Instrumental Support and Informational Support, also implied that the latter three types may all have an *underlying* socio-emotional element contained within them. He proposed that the different types of support are not, in fact, *entirely* independent of one another but are rather interrelated components of a complex phenomenon.

Cohen and Wills (1985) are in agreement with this in that they suggest that although support functions can be distinguished conceptually, in naturalistic settings they are not usually entirely

independent.

In addition both House (1981) and Cohen and Wills (1985) suggested that of all the types of social support, emotional support may be the most important in that it may have the most widespread effect across a variety of different problems/stressor situations. Several reviews of the support literature have come to the same conclusion (Cobb, 1976; Cohen and McKay, 1984; Cutrona and Russel, 1989; Cutrona, 1990; Heller, 1979; Sarason, Sarason and Pierce, 1990; Sarason, Pierce and Sarason, 1990; Schwarzer and Leppin, 1990; Thoits, 1982a; 1985b; Turner, 1983 and Winnubst *et al.*, 1988).

Cobb (1976), for example, went so far as to exclude instrumental and informational support from his definition of social support, while Thoits (1985) emphasised that emotional support plays by far the most crucial role in helping individuals cope with stressful situations. Numerous other studies have demonstrated that emotional support may indeed be the most important type. Factor analysis of the measures developed and used in these studies indicating the dominance of the emotional support type. However, for the purpose of parsimony the most relevant of these studies will be selected for closer examination. These are the studies carried out by Barrera, Sandler and Ramsay, 1981; Brown, Lent, Alpert, Hunt and Brady 1988; Mc Cormick, Siegert and Walkey, 1987 and Stokes and Wilson, 1984.

In the Barrera, Sandler and Ramsay (1981) study, a scale, referred to as the Inventory of Socially Supportive Behaviours (ISSB) was developed. This scale was designed to measure four types of social support, namely: Emotional support, Tangible assistance, Cognitive information and Directive guidance (Barrera, Sandler and Ramsay, 1981). While Barrera *et al.* (1981) reported good reliability and some evidence of convergent validity, it was other authors, namely Stokes and Wilson (1984) and Mc Cormick, Siegert and Walkey (1987) who reported on the dimensionality of the ISSB.

In the study conducted by Stokes and Wilson (1984), factor analytic procedures were used to determine whether the ISSB actually represented the four modes of social support as claimed by Barrera *et al.* (1981). In findings similar to the present study, results revealed that the first factor - Component one/Emotional support, accounted for the greatest percentage of variance, with the eigenvalue for the first factor equal to 10.76 and for the second factor equal to 2.76. Eigenvalues for the remaining two factors, while not specifically indicated, were nevertheless, reported to be greater than one but less than 1.75 (Stokes and Wilson, 1984).

Similar findings such as those above were reported by Brown, Albert, Lent, Hunt and Brady

(1988) in their assessment of the factor structure of Social Support Inventory (SSI) developed by Brown, Brady, Lent, Wolfert and Hall (1987). Based on the results of principal components factor analysis, five components of social support were derived, namely: acceptance and belonging, appraisal and coping assistance, behavioural and cognitive guidance, tangible assistance and material aid and modelling (Brown *et al.*, 1987). As with the present study, the first factor, that is, Acceptance and Belonging (which can be likened to the concept of emotional social support used in the present study), accounted for the largest proportion of the variance (42%) as compared to the second factor which accounted for 6.4% of the variance. The eigenvalue for factor one was 16.39 as compared to the eigenvalue for factor two which was 2.50. Subsequent factors, that is factor three, four and five, accounted for an even smaller proportion of variance than factor two and reported smaller eigenvalues (which were nevertheless, still greater than one).

Another aspect of the factor analysis results, demonstrated in the present study, that suggest that one type of support may be the most important and that this type may underpin all the others, is the nature of the spread of loadings across all factors, that is the nature of the **off-diagonal loadings**. Off-diagonal loadings are loadings of an item which occur on factors other than those that the item is expected to load on. Inspection of these items allows for the establishment of the extent to which the factor structure replicates that intended by the author/s of a particular measure.

In the studies carried out by Brown *et al.* (1988) and Mc Cormick *et al.* (1987), off-diagonal loadings were inspected in order to ascertain the convergent and discriminant validity of items with regard to how they loaded on specified factors. In order to judge whether an item has convergent validity, that is, the extent to which it corresponds to a particular expected factor in the rotated method of the factor analysis, a cut off point equal to or above which an item must load, is selected. In the present study the cut off point selected was .50. Discriminant validity is assessed by examining the extent to which items load on other factors, that is those factors that they are not expected to load on. According to Brown *et al.* (1988) the discriminant validity, that is the extent of the off-diagonal loadings, is judged to be satisfactory when the difference in magnitude between an items highest loading and the second highest loading is greater than .10. Mc Cormick *et al.* (1987), suggest that in instances were the difference in magnitude is less than .10, one cannot claim a perfect replication of the intended factor structure. Another criteria suggested by Mc Cormick *et al.* (1987) is that the one examine the *range* of off-diagonal loadings. In the present study the off diagonal loadings ranged from .39 to .51 and are thus moderately high, such a pattern suggesting that the intended factor structure is not *perfectly* replicated. However, in terms of the .10 difference

in magnitude criteria, only one item, namely, item number nine, did not have such a difference between its loading on the first factor as compared to its loading on a second factor. All other items that reported significant off-diagonal loadings, namely items 1,2,3,8,16,18,19 and 21 still met this criteria of .10 difference in magnitude. The interesting point about these items, however, was that with all of them, the off-diagonal loadings were either emotional support items that have high loadings on other factors, or were items that were designed to belong to the other factors but nevertheless, had high off-diagonal loadings on the emotional support factor.

A tentative conclusion that one may draw from this is that, in the first instance, all factors are to some degree measuring an element of emotional support, while in the second instance these particular items may be underpinned by elements of emotional social support. Statistically, this is to some extent supported by the pearson correlations conducted between the four subscales (See Table 5.6). The highest correlation reported was between emotional support and appraisal support. (This was to some extent expected, as in the literature, many authors have suggested that emotional and appraisal support are two dimensions, that can easily be collapsed together to form one dimension (See Powers, Champion and Aris, 1988; Schaefer, Coyne and Lazarus, 1981 and Winnubst *et al.*, 1988). The second and third highest correlations were reported between emotional support and instrumental support and emotional support and informational support. The lowest correlations were reported between the other types of social support, that is those other than emotional support, namely appraisal, instrumental and informational support.

Thus given that (i) the greatest proportion of variance in the factor analysis was accounted for by the emotional support subscale, (ii) that the off-diagonal loadings all related to either emotional support items loading on other factors or other factors loading on emotional support, and (iii) that the highest correlations reported between subscales were between emotional support and the other types and not amongst the other types themselves; it appears that emotional support is the **pre-eminent/dominant** factor and that it does to some degree underpin all the other factors.

According to Brown *et al.* (1988) and Stokes and Wilson (1984), with regard to factor analysis, in instances where the first factor accounts for a substantial proportion of the variance, this can suggest that the measure in question may, in fact, be unidimensional, that is it may consist of a general underlying support factor (Brown *et al.*, 1988; Stokes and Wilson, 1984). Nevertheless, they argue that because many writers have classified social support into several types and because of the potential theoretical and practical utility of such a multidimensional

conception, the examination of the nature of relationships between the principal components and specific stress-strain relationships is considered to be justified. In addition, the correlations between subscales in the present study, which indicate that, to a fair extent, subscales are independent of one another, mitigates against accepting that the supervisor social support scale is unidimensional.

In addition, Winnubst *et al.* (1988), argue that although emotional support may be the most important type of support, having a widespread effect across a variety of situations, help-oriented types of behaviours evident in informational and instrumental support may enhance this effect and thus, may still be more appropriate in specific situations.
This may be so as these help-oriented behaviours can increase coping mechanisms by providing stressed individuals with *specific* solutions to *specific* problems that they face (Cohen and Wills, 1985; Rook, 1984; Thoits, 1985b; Wilcox and Verpburg, 1985; Wortman, 1984).)

The proposals of O'Reilly (1988), Rook (1990), Sarason and Pierce (1990) and Schwarzer and Leppin (1990), support this viewpoint in that they argue that in terms of the duration of availability and effect, emotional support may be evident over long periods of time, having a generalised overall effect in both times of stress and times of no stress, while the other types of support may be required and utilised over specific, more short-term periods and in response to specifically occurring stressor situations. Rook (1990) and Sarason *et al.* (1990) thus distinguish between social interactions that are specifically aimed at enhancing coping in the face of specific challenges and social transactions that instill in individuals the belief that they have people who value and care about them and who are willing to try to help them if they need assistance or support.

If one views social support along these theoretical lines, the possibility exists that emotional support is more stable over time, and has a widespread effect on stress, health and well-being across a variety of situations, while the other types of support have more specific and short-term effects, only being mobilised in highly specific situations that require problem solving strategies that are needed, over and above the behaviour implied by emotional social support.

Thus, O'Reilly (1988) proposes that when operationalising support, researchers should consider the probability that there are two types of support. That is *'Everyday'* support under which the emotional type can be subsumed and *'Critical Times'* support under which the other types (along with emotional support) can be subsumed. Emotional support is included under the type of 'critical times' as, in certain instances, where a stressor is a specific threat to an individual's sense of self-esteem and self-worth, emotional support may be the critical type

needed to alleviate the effect of this particular stressor (Sarason *et al.*, 1990).

This view of social support offers a form of explanation as to why emotional support is the most dominant type while it does not mitigate against the importance of assessing other types with regard to specific stress-strain situations. Thus "while the most active ingredient of social support may be the individuals' belief that they have people who value and care about them" (emotional support), this "theoretical perspective does not mean that sampling the availability of specific supportive acts" (instrumental, informational and/or appraisal support) "does not provide useful information about social support" in general (Sarason *et al.*, 1990, p. 138).

SUMMARY/CONCLUSION:

To summarise and conclude, these views seem to suggest that social support may best be described in terms of a **subcomponent theory** in which, although there may be a single dominant factor, there are, nevertheless, distinct subcomponents or subfactors within the construct. Within this theory, in terms of the effect different types of support may have on health, it may thus be emotional support which may have the most widespread effect in most situations of stress, while other types have a mode-specific effects in specific stress-strain situations only. Cutrona and Russel (1989) draw the same conclusions and use the analogy of intelligence against which to compare the social support construct. They propose that, support, like intelligence consists of a global or general factor which is further differentiated into specific dimensions, reflected by individual social support provisions (See Figure 5.3). This general support factor can thus account for the correlations among the different dimensions/factors of social support (Cutrona and Russel, 1989).

Thus, on examination of these theoretical viewpoints, and on the basis of the other studies' results described above and the close replication of these results demonstrated in the present study, as well as in the light of the above analogy of intelligence, it appears that emotional support may in fact be the most dominant factor, underlying the whole social support construct. However, this does not negate the possibility that other types of support may be more appropriate in specific situations. This may be so, as even though these other types may imply an element of socio-emotional affect, the type of behaviours they entail may be more geared towards helping recipients engage in efforts at problem solving, than a simple *undiluted* form of emotional social support. Based on this conceptual rationale and the fact that the criteria required for distinguishing separable subcomponents within the factor analysis were still met with, the assessment of the different types of support in relation to specific stress-strain situations was still considered to be justified.

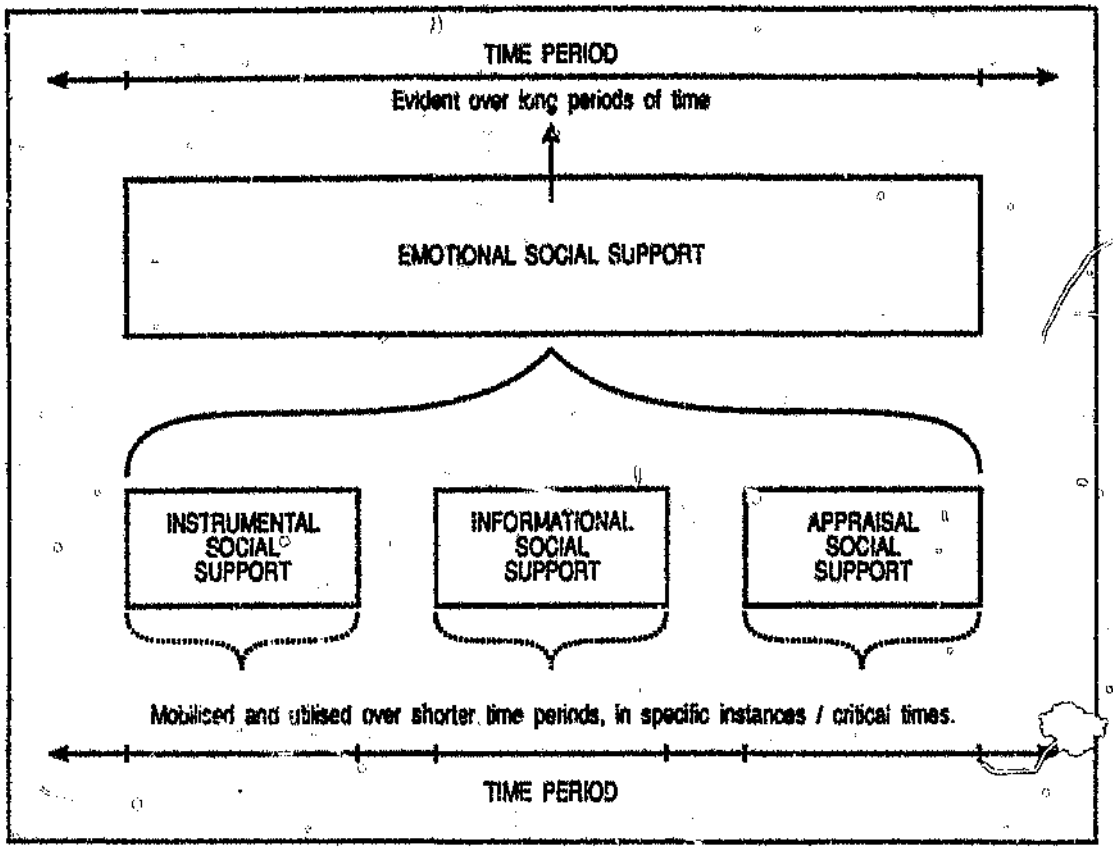

FIGURE 5.3 The Time Factor of Different Support Dimensions

However, before going on to examine the methodology used and results obtained in such analyses (in the following chapter), there are other aspects of the present measure that still need to be discussed. These are, the dropping of the dimension of satisfaction used in the present measure from subsequent analyses, and the results of the other psychometric properties of the scale that were assessed, that is the reliability and validity of the present measure.

OCCURRENCE VS. SATISFACTION/ THE DROPPING OF THE SATISFACTION DIMENSION:

Another issue that needs to be discussed with regard to the results obtained in the present study, is that of the high correlation between the dimensions of social support occurrence and social support satisfaction. Before going on to discuss possible reasons as to why these dimensions were so highly correlated, a brief discussion of why the present study sought to assess both, needs to be outlined.

Numerous researchers have stressed the need to assess both the *quality and quantity* of support. According to Tardy (1985) and Barrera and Baca (1990) an evaluation of the extent

to which individuals are satisfied with the support they have received or perceive to be available to them, is crucial to the understanding of the social support process. Sarason, Sarason and Pierce (1990) argue that different individuals may attach different personal meanings to the "supportive" responses of network members and that this, in turn, is likely to have a strong influence on the contribution made by these relationships to the individual's coping efforts and adaptation. Thus, it appears that it is not sufficient to assess only "how much" an individual is receiving. Rather one needs to ascertain whether the individual perceives such support to be "positive" and/or whether the individual perceives the amount of support to be sufficient to match his/her needs. In other words, quantity does not necessarily imply quality nor does it mean that the quantity received is adequate in terms of the quantity required.

Cutrona (1990) notes that support providers frequently offer well-intentioned, but highly distressing 'social support', which derives its aversiveness form a lack of congruence with the receiver's current needs. The effect of a particular social support behaviour offered by the provider to the receiver depends on what and how much the latter sees him/herself as needing (Sarason, Sarason and Pierce, 1990). According to O'Reilly (1988), the probability does exist that behaviours intended to be supportive can be interpreted differently, even negatively, by different people. In the event of this, it is not sufficient to use a measure that is based primarily on having individuals indicate if others have provided them with specific types of support as such a measure does not offer any information on whether, or to what extent, such actions were considered to be supportive (O'Reilly, 1988).

Consequently, the present study sought to address this issue by including dimensions which assessed both the quantity and the quality of support available to, or received by respondents. The intention was to assess the degree to which the dimension of occurrence was correlated with the dimension of satisfaction, with a high correlation indicating a high degree of congruence between what was needed/desired and what was available/received; and a low correlation indicating a poor degree of congruence between what was needed/desired and what was received/available. Thus, when there was a high degree of congruence, that is, a high correlation between the two dimensions; occurrence would be high and satisfaction would be high or occurrence would be low and satisfaction would be low. When there was a low degree of congruence, that is a low correlation between the two dimensions, occurrence could be high and satisfaction would be low or, occurrence could be low and satisfaction would be high. Thus, individuals may be scoring high on occurrence but this amount may, nevertheless, still be considered to be too little or too much in terms of what is needed. When support occurrence scores are low, and satisfaction remains high, this may indicate that in spite of low

levels of occurrence this minimal amount of support is all that is required by these particular social support respondents.

In the present study, results revealed that the correlations between the two dimensions were very high (See Table 5.4). Thus, what this seemed to imply, was that in the particular sample used in the present study, there was a high degree of congruence between what subjects perceived themselves to be receiving and what they perceived themselves to be needing. Thus, when there was a high degree of occurrence, satisfaction was high and when there was a low degree of occurrence, satisfaction was low.

Similar results were reported in the study carried out by Brown *et al.* (1988). In their study, this notion of congruence between supply and needs and how this determines satisfaction with overall support, was investigated. They proposed a model of P-E Fit in which satisfaction with social support was seen to be a function of the match between the strength of one's interpersonal needs and the amount of social resources provided to fulfil those needs (Brown *et al.*, 1988). What their results indicated was that the greater the degree of P-E fit between supply and needs for support, the greater the degree of satisfaction with support (See Figure 5.4). However, at the point of perfect fit between supply and needs, the degree of satisfaction became asymptotic. That is, over this point, excesses of social resources beyond need strength, neither increased nor decreased the degree of a subjects reported satisfaction.

In addition, in the study carried out by Barrera and Baca (1990) a similar pattern of results emerged. They examined the relationship of frequency of support receipt with support satisfaction for individual's with both conflicted and unconflicted network ties. In both instances, the higher the degree of support frequency receipt, the higher the degree of support satisfaction. However, as with Barrera and Baca's (1990) study, the present study did not assess the extent to which supply matched needs. Therefore, no point at which fit was perfect could be determined and, thus, whether or not the degree of satisfaction would have levelled out at the point of perfect fit could not be determined. Nevertheless, both the studies of Brown *et al.*, 1988 and Barrera *et al.*, 1990, offer suggestions that may explain the high correlation between occurrence and satisfaction in the present study.

On the basis of these findings, scores obtained on the satisfaction dimension were not included in any of the present study's subsequent statistical analyses as they were not deemed to be yielding information different to that supplied by scores on the occurrence dimension. However, it must be noted that this finding may have been peculiar to the particular sample under study and does not mean that such findings would necessarily be replicated across

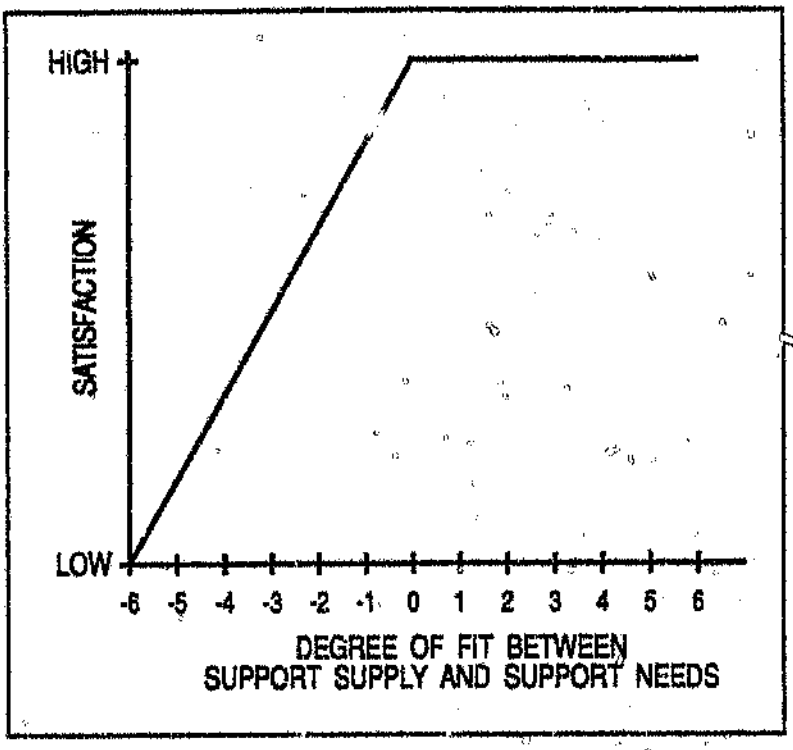

FIGURE 5.1 (Adapted from Brown, Alpert, Lent Hunt & Brady; 1988)

different samples. Consequently, while this high correlation ruled out the inclusion of the satisfaction dimension in the present study, its exclusion in other studies is not recommended as, by assessing satisfaction with support, a criterion is provided which enables one to establish if there is actually congruence between support offered and recipient need as well as the extent to which such congruence is evident (or lacking). Only if a high degree of congruence is established, can a study then go on to exclude the dimension of satisfaction from any subsequent analyses to be conducted with the variable of social support.

PSYCHOMETRIC PROPERTIES OF THE FOUR FACTOR SUPERVISOR SOCIAL SUPPORT SCALE

With regard to the other psychometric properties of the scale, namely: internal consistency reliability, temporal reliability, construct validity and convergent validity, the Supervisor Social Support scale demonstrated psychometrically adequate properties.

Internal consistency reliability was reported for each of the individual subscales and are as follows: Emotional support - $\alpha = .93$; Informational support - $\alpha = .66$; Instrumental support - $\alpha = .83$ and Appraisal support - $\alpha = .83$. Such findings are considered by previous researchers to be satisfactory (Anastasi, 1982; Bluen and Barling, 1986) and indicates that the sub-scales do demonstrate a degree of homogeneity, that is, they do demonstrate a degree of inter-item consistency. With regard to the informational support subscale, the reported alpha (.66) may

be considered to be moderately low. This, however, may be due to the fact that the subscale was considerably small in terms of the number of items it contained (3 items). Similar low alphas, (.66 -.68), were reported for subscales consisting of a small number of items in a prospective study carried out by Nowack (1991), which examined the relationship between a number of psychosocial factors, (one of which was social support), and health status. Within this study, given the small number of items within subscales, these alpha levels were considered to be acceptable (Nowack, 1990). Burns and Bluen (1992) also reported alphas ranging from .67 - 0.75, for the subscales of the Multidimensional Type A Behaviour Scale which was a measure that they developed to assess proposed components of Type A behaviour. In addition, McKennel (1970) argues that alpha levels above .60 are still considered to be acceptable in the social sciences.

With regard to temporal consistency, the ability of the scale to reflect stability of scores over a period of time was also demonstrated. A temporal reliability correlation coefficient of .82 was reported which was considered to be highly satisfactory (Anastasi, 1982).

Convergent validity was also demonstrated by correlating the scale with other measures with which a positive correlation would be expected, namely, Taylor and Bowers (1972) Supervisory Support Scale and the Supervision Scale of the Job Description Index (Smith, Kendall and Hulin, 1969).

The positive correlation between the Taylor and Bowers (1971) Supervisory Social Support Scale and the Supervisor Social Support Scale of the present study was consistent with Jones and James (1979) who found that Taylor and Bowers leadership dimension of support loaded highly on a factor referred to as leader facilitation and support developed in their (1979) study. The positive correlation between the present study's Supervisor Social Support scale and satisfaction with supervision is consistent with a number or researchers who have shown that subordinates are more satisfied with supervisors who are considerate, supportive and employee centred (Halpin, 1957; Halpin and Winer, 1957; Likert, 1967; Vroom, 1964). House and Wells (1978) found a positive correlation between job satisfaction and supervisory support ($r = .38$; $p < .05$). House, Filley and Gajurati (1971), also reported high correlations (Mean $r = .42$; $p < .01$) between indicators of job satisfaction and leaders demonstrating consideration in a sample of 185 workers in a petroleum company. On the same sample House *et al.* (1971) found that the degree to which supervisors set clear objectives and procedures on the job with subordinates was significantly and positively related (mean $r = .27$; $p < .05$) to job satisfaction.

Although, convergent validity was assessed by comparing the present study's multidimensional

measure with measures considered to be unidimensional in nature, this was considered to be acceptable. A similar approach was used in a study carried out by Burns and Bluen (1992), in which they compared sub-scales measuring sub-components of Type A behaviour with two global Type A behaviour scales. This procedure is also regarded as appropriate by Stokes and Wilson (1984) and Brown *et al.* (1988). According to them, a measure that indicates that one factor accounts for a major proportion of variance, (See results of factor analysis), can be appropriately used as both a global and multidimensional measure of support, and can thus be acceptably correlated with other global indexes in order to establish convergent validity. It is, however, recommended that future researchers assess the convergent validity of the supervisor social support scale by comparing it to both types of measures, that is, those that are global and those that assess multi-components of support.

Thus, as can be seen the scale does demonstrate adequate psychometric properties and represents an advancement of previous measures of support, many of which have failed to consider the multidimensional nature of social support or have failed to successfully develop a measure of support that is multidimensional in nature.

Many scale development pitfalls were avoided in the present study by following the scale development recommendations outlined by a number of prominent social support researchers (eg. Cohen and Wills, 1985; Cutrona and Russel, 1989; Depner, Wethington and Ingersoll-Dayton, 1984; House, 1981; House and Kahn, 1985; O'Reilly, 1988; Payne and Jones, 1987; Tardy, 1985; and Tetzloff and Barrera, 1987).

Following the recommendations of Depner *et al.* (1984), Payne and Jones (1987) and O'Reilly (1988), the indices used to measure support were consistent with a broad range of social support definitions and used a format that was both convenient and reliable. In addition, the measurement approach adopted struck a balance between precision and generalisability. This required an examination of past and tried methods of measuring support so that these methods could be incorporated into the new measure, while still including items that would facilitate responses that were specific to the particular provisions of social support relevant to the aims of the present study (O'Reilly, 1988).

In addition, it will be remembered from Chapter 4, that Tardy (1985) identified four criteria that relate to the properties of a good social support scale, namely, assessment of:

- The **Direction** of social support,
- The **Disposition** of social support,
- The **Content** of social support, and

The Network of social support.

The Four Factor Supervisor Social Support Scale addressed the direction of social support by examining receipt of social support from a supervisor. Disposition was addressed by the occurrence dimension which assessed the extent of availability and enactment while the satisfaction dimension determined perceived quality of social support. The present scale, thus, represents an advancement over numerous previous measures of social support which have included only one of these dimensions.

The Supervisor Social Support Scale also addressed the prescribed criteria of Content and Network of social support. In terms of content, four different types of social support were examined. Once again this represented an improvement on existing measures of social support (eg. Beehr, 1976; Jones and James, 1979 and Taylor and Bowers, 1972) which have not differentiated between and/or included more than one of the different social support types. In terms of Network, the supervisor as source of social support and representative of the network was selected. Different types of support coming from other network members were not selected, due the exploratory nature of the present study.

Selection of the single source of the supervisor was also based on the requirement of specificity which stresses that one must identify the most appropriate source of support for specific stress-strain situations (Cohen and Mackay, 1984, Cohen and Wills, 1985). As the supervisor was considered to be the most appropriate source (See Abdel-Halim, 1982; Beehr, King and King, 1990; Caplan, 1976; Caplan et. al, 1975; Cobb, 1976; French and Caplan, 1978, Winnubst et. al, 1982; 1988), it was the only network member that was selected. Like Tardy (1985), Cohen and Wills (1985), Cutrona and Russel (1989) and O'Reilly (1988) also stressed the importance of assessing satisfaction with support along with the assessment of the availability and enactment of support. The present study's measure by including the two response formats, namely, that of occurrence (which assessed availability and enactment) and satisfaction, attempted to address this issue.

With regard to reliability and validity, the present measure, once again, represented an improvement on previous measures, many of which have used dubious methods to assess reliability and/or validity (See O'Reilly, 1988). Those that have used more exacting methods for assessing reliability and validity have generally obtained results that were non-supportive to at best moderately supportive of the instruments efficacy in this regard (See Schaefer, Coyne and Lazarus, 1981; Turner, 1981; Jenkins, Mann and Belsey, 1981; McFarlane, Norman and Streiner, 1981; Norbeck, Lindsey and Carrieri, 1981).

In the present study both quantitative and qualitative methods were used to assess reliability and validity. With regards to reliability, quantitative methods were used, resulting in the reports of adequate test-retest reliability and internal consistency. Both quantitative and qualitative methods were used to assess validity leading to adequate reports of construct and content validity. Quantitative methods involved the use of factor analysis (construct validity), an examination of internal consistency (content and construct validity), and the correlation of the present study's measure with other similar measures (convergent validity). Qualitative methods included the use of a pilot study in which there was close consultation with experts in the field of Industrial Psychology, which also ensured that a high degree of content validity was built into the scale. Another part of the pilot study, in which subject's were asked questions pertaining to their feelings about and understanding of the measure, ensured a high degree of face validity.

Consequently, such sharpening of theoretical analysis and strict adherence to the above methodological recommendations enabled the development of an adequate multi-dimensional measure of supervisor social support. However, this is not to say that the scale does not have a number of limitations. In the following section these limitations will be outlined, along with theoretical and practical implications of the present study's findings for future research.

LIMITATIONS OF THE STUDY AND IMPLICATIONS FOR FUTURE RESEARCH

LIMITATIONS

In terms of the procedures used in the development of the Four Factor Supervisor Social Support Scale a number of limitations can be identified.

The *first* limitation pertains to the number of validation criteria used. Two criteria were used to assess convergent construct validity. Further research is needed to assess not only convergent validity of the scale using different criterion measures, but there is also a need to assess the scale's discriminant validity. In addition, the present study used validating criteria that were considered to be unidimensional in nature. Future research needs to compare the present study's measure to other multi-component measures of social support.

The *second* limitation pertains to the nature of the sample. The Four Factor Supervisor Social Support Scale was validated on a sample that was predominantly White (69.7%) and predominantly Female (69.8%). Numerous researchers have noted that race, culture and sex

can introduce variations into the way social support is perceived and utilised (For a more detailed discussion of this issue - See Chapter 6). Therefore additional testing of the applicability of the measure to other population groups as well as to a group in which males are more representative is thus required. As the instrument was validated on a sample employed within a large assurance organisation and a public utility company, the applicability of the measure to other organisational sectors also needs to be assessed.

Another limitation as regards the sample was that of sample size when testing for temporal reliability. The testing of temporal reliability required that subjects include their birth date in the biographical data so that responses from time one testing could be readily matched to responses at time two testing. However, despite the fact that respondents were assured of the confidential nature of the study, many were reluctant to submit their birth date as they felt that such information could serve to identify them, thus placing their careers at risk if they responded with negative attitudes towards their job and their supervisor. On the basis of these expressed reservations, subjects were told that they did not have to submit their birth date if they did not wish to do so. Consequently, only nineteen respondents voluntarily submitted birth date information and, thus, only nineteen responses could be used to test for temporal reliability. Future research should, therefore, attempt to obtain larger samples on which temporal consistency could be evaluated.

A *third* limitation relates to the method of data collection. Only one source of data collection was used, namely, a self-report, paper-and-pencil tests. There are a number of problems associated with this method of data collection. Self report inventories are especially subject to response biases such as social desirability and acquiescence and defensive tactics such as denial or rationalisation (Anastasi, 1982; Odesnik, 1988). Although the preamble attached to the questionnaire was designed to assure respondents that their responses would remain confidential, the possibility still exists that subjects may have been biased or defensive in recording their responses. Therefore, given the recognised limitations of using single self-report data sources, in the future, multiple sources of data collection, whereby measures of support received by the respondent are obtained from other sources such as that of the respondent's peers or coworkers and the respondents supervisor, could be used to enhance the accuracy of the scores reported by respondents (Babbie, 1986).

A *fourth* limitation of the present study was its use of a nomothetic approach in which largely quantitative empirical research and survey methods were used. Use of an idiographic, qualitative approach in which techniques such as in depth interviews are incorporated could greatly enhance understanding of the social support concept.

IMPLICATIONS

Considerable research is still required to validate the Four Factor Supervisor Social Support Scale across a variety of different samples within different organisational sectors and against different validating criteria. Future researchers are also recommended to follow an approach towards scale development that incorporates the use of qualitative investigative techniques. Lieberman (1986) in fact urges that though there is an increasing call for the development of specificity based on the recognition of oversimplification in much of the current data, this should not lead researchers "pell-mell" into a rush to generate increasingly more detailed, diversified and intensive data collection schedules (p. 465) using what he refers to as "snapshot research strategies".

According to Lieberman (1986) problems arise when one tries to build a model of interpersonal relationships using quantitative methods only, no matter how rigorous these methods are Consequently, when researchers attempt to obtain a differentiated understanding of the nature of social supports through the use of such a techniques, the task may become unachievable. This may be so as researchers, in the attempt to create measuring instruments that distinguish between the different dimensions of social support, cannot fundamentally assume that respondents define different types of support in the same way that, they, the researchers, do so (Lieberman, 1986). There is a strong possibility that subjects may be unable to distinguish between different types of social support selected by researchers or that they may have different definitions or categories of what constitutes what types of helping behaviours (Lieberman, 1986; Wethington, 1982).

Cutrona (1990) states, that "Clearly, many questions must be addressed before we can usefully predict the outcome of interactions between individuals who have experienced a stressful life event and those who are attempting to provide assistance. Type of social support is one dimension that merits investigation, but at this time, we have much to learn methodologically and substantively before an optimal matching model of stress and social support can be validated" (p. 13).

Thus, in terms of scale development, the methodological steps outlined above may be insufficient. What may be required in addition to the steps outlined and followed above is an 'intervention' approach, conducted on individuals who are at present confronting a particular type of stressor or about to confront a particular stressor (Hobfoll and Freedy, 1990). Using such an approach, subjects can be observed prior to the experience of stress, at the time that they experience the stressor as well as during the time in which they mobilise and utilise social support resources made available to them to deal with the stressor/s. Within this period of

observation, in-depth interviews can then be conducted in order to establish whether or not the support the respondents perceive themselves to be receiving is adequate and what it is about the support received that they actually find helpful or not helpful in terms of the stress they are experiencing. Such qualitative data collection may then enable researchers to identify whether there *are* different helping behaviours that are perceived differentially by respondents and, if so, *in what way* do respondents find these different behaviours to be helpful in terms of dealing with the particular stressor/s experienced. On the basis of the data collected here, researchers can then go onto develop items for functional social support measures following the methodological steps adhered to in the present study.

An example of such a study was that carried out by Harris (1992) which studied the types of support received by caregivers of Alzheimer patients and the differential impact these types of support had on life strains. Face-to-face interviews were conducted with caregivers who were asked to indicate, in response to open-ended questions, what types of support they were receiving from a network of providers and what type of support they desired. Results revealed that while they were receiving emotional support, the type of support they actually needed was practical assistance and tangible aid. This type of support was deemed to be more necessary in order to enable them to deal with the crisis of having to care for a family member with Alzheimer's disease. Thus in these particular circumstances it was instrumental support that was more crucial to caregivers as opposed to emotional support with regard to alleviating life strains. Although the goal of this particular study was not geared towards the development of a multidimensional measure of support, the qualitative data that it generated, through use of an interview technique, has important methodological implications for future scale developers.

SUMMARY/CONCLUSION:

Thus, while the present study was able to develop an adequate multidimensional measure of support without the use of in-depth interview techniques, the use of such qualitative means could have greatly enhanced the adequacy of the measure developed. An additional focus of this study was, however, to assess the relationship of specific types of social support from supervisors to specific stressors and strains occurring within the work environment. Consequently the following chapter will be devoted to an examination of the relationship between different types of supervisor social support, as measured by the Four-factor Supervisor Social Support scale, and specifically selected stressors and strains occurring within the context of work.

CHAPTER SIX:
SUPERVISOR SOCIAL SUPPORT AS A MODERATOR IN THE WORK STRESS - STRAIN RELATIONSHIP

AIM AND RATIONALE

The aim of the present research was twofold. As discussed in Chapter 5, the first aim was to develop a psychometrically adequate four dimensional scale of supervisor social support. The four dimensions of support assessed were: *Emotional Support*, *Appraisal Support*, *Instrumental Support* and *Informational Support* (House, 1981). This aim was carried out in Phase One of the study.

The second aim of the study, to be carried out in Phase Two, was to demonstrate that these specific types of supervisor social support could moderate the relationship between specifically selected work stressors and individual and organisational strains. In addition, the second phase aimed to demonstrate that specific types of supervisor social support could have a main effect on specifically selected organisational stressors and individual and organisational outcomes, independent of the experience of work stress.

In the fulfillment of these aims, both phases of the study sought to satisfy the *requirements of specificity* (Cohen and Mackay, 1984). According to these requirements, one needs to identify the most appropriate types of support from the most appropriate source and then match these with specific stressor-strain situations in which they would have the most beneficial effect.

Within phase one of the study, namely the scale development phase, the first aim was fulfilled. An instrument measuring four types of supervisor social support was developed. This instrument demonstrated adequate psychometric properties, with regard to validity and reliability and was empirically able to distinguish between the four proposed dimensions of social support. What thus remained was to (1) determine whether these different types of support had a differential impact with regard to specific stressors and strains, and (2) to assess the utility of the instrument developed in phase one in terms of its ability to adequately assess these differential relationships.

There was, however, a number of changes made to two of the three hypotheses described in Chapter 5. As can be recalled from the previous chapter, three hypotheses were formulated which were to be tested in the second phase of the present study:

The first hypothesis was that emotional and appraisal supervisor social support would moderate the relationship between role ambiguity and role conflict and self-esteem and psychological well-being. In addition, it was hypothesised that these two role stressors would have a direct effect on self-esteem and psychological well-being and that emotional and appraisal support would have a direct effect on self-esteem and psychological well-being.

The second hypothesis proposed that informational supervisor social support would moderate the relationship between ambiguity and conflict and propensity to leave one's job and job satisfaction. This hypothesis also proposed that role ambiguity and conflict and informational support would have direct effects on these two dependent variables.

The third hypothesis proposed that instrumental support would moderate the relationship between work overload and psychological well-being, propensity to leave one's job and job satisfaction. It was also proposed that work overload and instrumental support would have direct effects on these three dependent variables.

However, in the light of the findings obtained in the first phase of the present study, it seemed necessary to expand upon these hypotheses. The findings referred to are those obtained in the factor analysis which revealed that emotional support was the most dominant support type. In addition, the studies carried out by Brown *et al.* (1988), Mc Cormick *et al.* (1987), Stokes and Wilson (1984), and Vaux *et al.* (1987) also suggested the pre-eminence of the emotional support type and that this type could have a widespread effect across all situations of stress and strain.

Consequently, the hypotheses described above were amended to include the assessment of emotional supervisor social support across all of the proposed stress-strain situations: Thus, emotional support was added to both the second and the third hypothesis as an additional type that could (1) moderate the relationship between ambiguity, conflict and overload and psychological well-being, propensity to leave one's job and job satisfaction, and (2) have a direct effect upon the dependent variables.

The three amended hypotheses are represented in Figure 6.1 below.

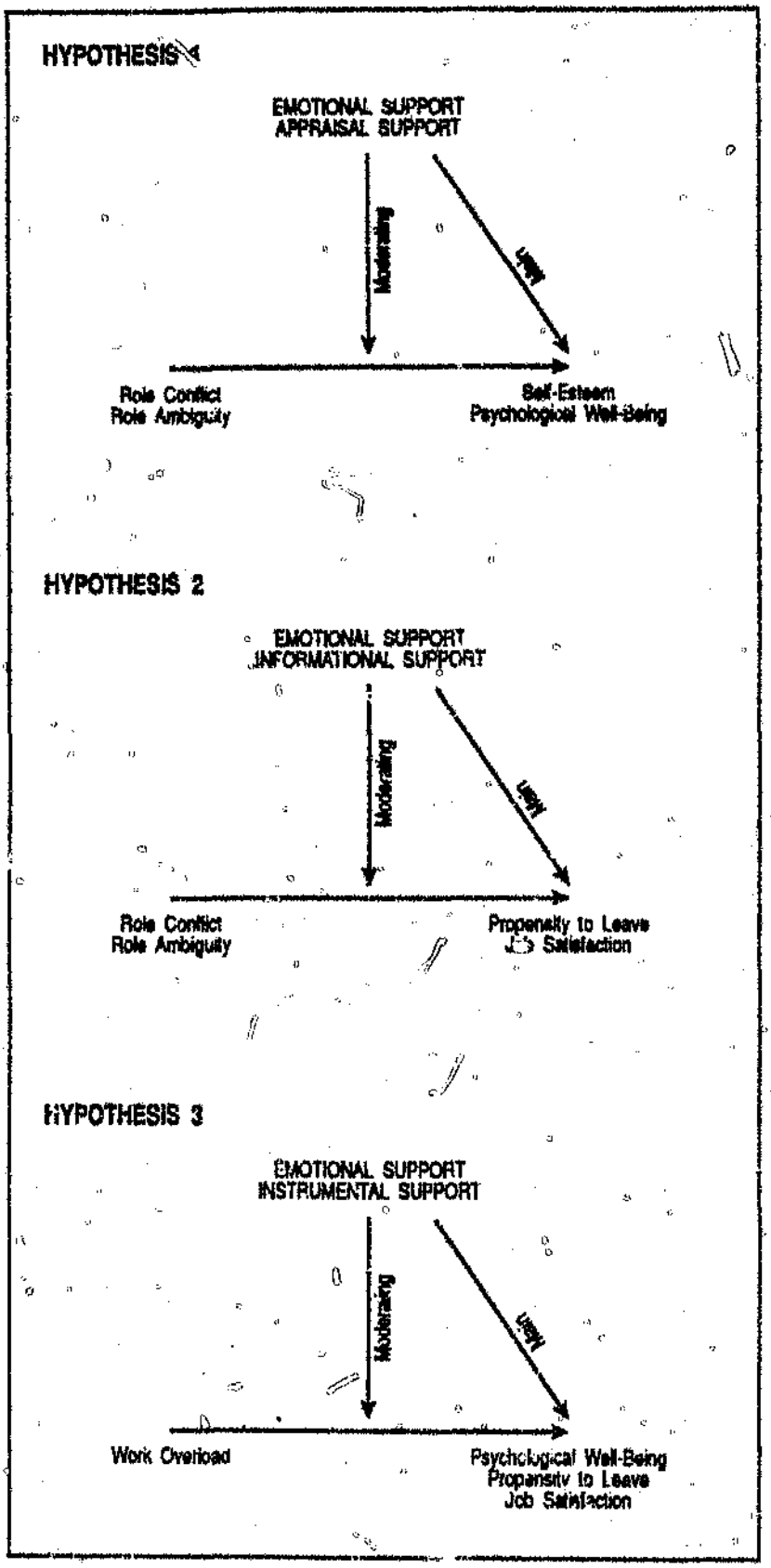

FIGURE 6.1 The Amended Hypotheses

METHOD

EXPERIMENTAL DESIGN

The aim of the second phase of the present study was to explore the role of different types of supervisor social support in the relationship between work stress and individual strains. In view of this, the research applied a cross-sectional field design (Kerlinger, 1981). As the aim of the present research was not to establish causality, a longitudinal study was not deemed to be necessary. In using a cross-sectional design subjects were required to provide information on different aspects of their work life occurring at one time. Such an approach was however, also retrospective in that subjects were asked to recall the occurrence of certain events.

Although the use of cross-sectional designs has been widely criticised in the research on social support as it does not allow for the determination of causality, its usage in the present study was considered to be acceptable. This was so due to the exploratory nature of the present research which entailed the development of a *new measure* of the social support construct and the testing of its utility within a *highly specific* model of stress and strain.

Used in this way, the cross-sectional design has the ability to provide the basis for a *preliminary, exploratory* examination of the relationship of *different types* of support to *specific* stressors and strains. It is also considered to be appropriate for the assessment of main and moderating effects, as was the purpose of phase two of the present study (Suchet and Barling, 1986).

However, Payne and Jones (1987) note that future studies of social support should almost certainly always be longitudinal in design whether they are intervention studies, experimental studies or large-scale survey studies. Yet, they point out that cross-sectional studies *do* have value as they do allow us to claim with reasonable confidence that social support can influence the severity of stressors and the psychological experience of individuals. The use of cross-sectional studies is, however, more especially justified when they are used to design and test *new measures* of support which might be used in future longitudinal designs (Payne and Jones, 1987).

As this was the aim of the present study, namely, to develop a new and more advanced measure of social support and test the measure within a specific stress-strain model, the use of a cross sectional design was considered to be appropriate.

THE MODEL

The model to be assessed in phase two was that of **The Michigan Model** (Caplan *et al.*, 1975). As mentioned in Chapter 3, this model adopts a transactional approach to the study of stress.

Within this model, stress is seen as a relationship between the individual and the environment. As such, stress occurs when (1) the individual feels that there is an *imbalance* between the demands of the environment and his or her resources to meet these demands; and (2) when the environment does not provide sufficient opportunities to fulfil the individual's needs.

In the Michigan model, the focus is on chronic work stressors such as role overload, role conflict and role ambiguity and their psychological, physiological and/or behavioural consequences, the latter which are considered to be possible precursors for disease. Thus, the Michigan model assumes that strains can eventually lead to illness. The model further suggests that there are social environment variables, *particularly social support*, which can buffer the relationship between perceived stressors and strains, as well as have a main effect upon these variables (Winnubst *et al.*, 1988).

In adopting this model in the present study, the variables included were designated the roles of "independent variables", "moderator variables" and "dependent variables" (See Figure 3.1 - Chapter 3). Independent variables or stressor variables were those of **Role Conflict, Role Ambiguity** and **Role Overload**; the moderator variables were those of the four types of **Supervisor Social Support** and the dependent variables or strains were those of **Job Satisfaction, Propensity to Leave One's Job, Self-Esteem** and **Psychological Well-being.**

SAMPLE

The sample consisted of 285 subjects obtained from a large public utility and a large insurance organisation. Ages of participants ranged between 16 and 64 years (Mean = 29). 198 (69.7%) of the participants were White, 22 (7.7%) were Black, 32 (11.3%) were Asian and 32 (11.3%) were Coloured. The home language spoken by 183 participants (64.2%) was English, 79 participants (27.7%) spoke Afrikaans, 21 (6.5%) spoke a Black language and two participants (0.7%) indicated that they spoke another home language other than those described above. Years of Education ranged from ten to 16 (Mean = 12). 128 participants (45.1%) were single, 131 participants (46.1%) were married, 22 (7.7%) were divorced and three (1.1%) were widowed. The number of children participants had ranged from 0 to 5 and 86 of the participants (30.2%) were men and 199 (69.8%) were women.

Demographic details are presented in the following Table 6.1.

TABLE 6.1. Demographic Details of Sample

	N	M	SD	Range
Age	284	29.32	9.98	18-24
Years of Education	285	12.13	1.34	10-16
Marital Status				
Single	128			
Married	131			
Divorced	22			
Widowed	3			
Number of Children	285	0.95	1.2	0-5
Sex				
Male	86			
Female	199			
Race				
Black	22			
White	198			
Indian	32			
Coloured	32			
Home Language				
English	183			
Afrikaans	79			
Black Language	21			
Other	2			

The need to ascertain the biographics of the sample under study was due to the fact that these variables, namely, race, educational standard, socio-economic status, job level, age, sex, marital status and number of offspring have been shown to be factors that can exacerbate or ameliorate the affect of stress on health as well as effect the way in which social support is perceived of and utilised (Antonucci, Fuhrer and Jackson, 1990; Flaherty and Richman, 1989; House, Umberson and Landis, 1988; Newcomb, 1990).

In terms of race, research has indicated that there are variations in help seeking behaviour amongst persons from different social classes and from different cultural backgrounds (Antonucci, Fuhrer and Jackson, 1990; Eckenrode, 1983). In South African society, class/socio-economic status and culture is divided up largely along racial lines. By and large, Blacks have constituted the lower socio-economic levels while Whites have made up the

middle to higher socio-economic levels. In turn, within South African society there has been a direct link between race, socio-economic status and levels of education. Those from the lower socio-economic levels, are primarily Blacks and tend to have the least education, while those from the higher socio-economic levels, mainly Whites, usually have the greatest degree of education.

A greater degree of education, in turn, appears to foster greater cognitive complexity which facilitates within the individual a more realistic perception of stress and better problem solving skills (Antonnuci *et al.*, 1990; George, 1980). Shanan, Kaplan, Nair and Garty (1978) also found that those that were more educated had more positive self perceptions and a greater readiness to deal with complexity and novelty.

Job level/Grading was also assessed as it has been demonstrated that those in more autonomous jobs, more autonomy being found in higher level jobs, show greater intellectual flexibility when it comes to dealing with stress (Kohn and Scholler, 1978). Consequently, as research indicates that socio-economic status and education may affect the way in which subjects perceive and respond to stress, as well as the way in which they perceive and utilise social support, and as socio-economic status and education in South Africa is largely divided along racial lines, the need to assess race was considered to be crucial.

Variations in help-seeking behaviour have also been found amongst different age groups and between the sexes (Flaherty and Richman, 1989). Brown (1978) found a strong negative relationship between age and the seeking out of social support. Chirogboga, Coho, Stein and Roberts (1979) reported that older individuals seek support less than those that are younger and that men seek support less than women. Research by Defares, Brandes, Naas and Van der Ploeg (1985) and Flaherty and Richman (1989) also revealed that women seek out and utilise social support more than men. The latter, they suggested, prefer to use cognitive-active coping strategies. Consequently, it was considered important to assess age and sex in order to ascertain if these variables were introducing any variation into the stress-social support-strain process.

The need to determine marital status and the number of children that respondents have arises out of research which has suggested that those that are married have an additional source of support and intimacy coming from the spouse as opposed to those that are single (Antonnuci *et al.*, 1990). On the other hand, especially for women, being married, having children and being employed can exacerbate stress perception. In terms of the additive stress model, the more stressors one is exposed to, the weaker ones resistance becomes in dealing with them

(Pleck, 1977). Consequently, those that are working and have their work roles conflicting with their family roles, may experience more stress in work place than those that are single and have no children.

Thus, in the light of this body of research, the inclusion of the biographical variables was critical. **T-tests, One-way Analyses of Variance** and **Pearson Correlation Coefficients**, (discussed below), would be carried out in order to determine whether these variables were contributing to any variance in the variables under study. If, in fact, their contribution to the variance was found to exist, these variables would then be controlled for as covariates in the statistical analyses of social support's mai and moderating effects.

PROCEDURE

A questionnaire of the relevant scales was presented to both male and female members who were employed at two large national organisations (See Appendix E). It was entitled "Employee Attitude Questionnaire". The relevant scales assessing the independent, moderator, and dependent variables were contained within this questionnaire. A preamble on the front page explained what was required of participants and guaranteed the confidentiality of their responses. Respondents were then required to record their biographical information. The questionnaire was administered by the author in the training centres of both organisations. It was administered to groups of twenty to thirty at a time, with the period of administration being conducted over one week. On administration the questionnaire was presented on an overhead projector and the author went through the instructions on how to complete the scales with the respondents. The confidentiality of their responses and the fact that it was not a test was emphasized. Respondents were also told to take as much time as they needed to complete the questionnaire. On completion of the questionnaire they were then instructed to seal it into the unmarked envelope attached to the questionnaire and to post it in a box provided by the author. As the author was present at each and every administration a response rate of 100% was achieved.

MEASURING INSTRUMENTS

Eight scales were included in the questionnaire. A separate discussion of each scale follows below.

THE DEPENDENT VARIABLES

JOB SATISFACTION

Job Satisfaction was measured using the Overall Job Satisfaction scale (Warr, Cook and Wall, 1979). The scale consists of sixteen items designed to measure satisfaction with both intrinsic and extrinsic job features. The first fifteen items describe specific job features such as hours of work, the physical work conditions, rate of pay, and fellow workers, and respondents are asked to record the extent to which they are satisfied or dissatisfied with each of these features. The final item requires subjects to indicate how they feel about their job as a whole. Responses are recorded by employing a seven-point Likert format which ranges from "I'm extremely dissatisfied" (1) to "I'm extremely satisfied" (7).

The development of the scale was based on an extensive literature review, a pilot study, and two investigations with a sample of 200 and 390 male blue collar workers in a United Kingdom manufacturing industry. Warr *et al.* (1979) reported acceptable internal homogeneity (alpha = .78) and test-retest reliability over a six month period (alpha = .63). In addition, adequate construct validity was demonstrated with the Overall Job Satisfaction scale correlating significantly ($p < .001$) and in the predicted direction, with measures of intrinsic job motivation ($r = .35$), work involvement ($r = .30$), life satisfaction ($r = .42$), happiness ($r = .49$) and self-rated anxiety ($r = -.24$). When used on a South African sample, Bluen (1986) reported acceptable internal homogeneity (alpha = .95) and a significant test-retest reliability coefficient ($r = .63$, $p < .001$). In the present study, the Overall Job Satisfaction Scale's reliability was confirmed (standardised alpha = .93).

PROPENSITY TO LEAVE ONE'S JOB

Propensity to leave one's job was assessed using the Propensity to Leave Scale (Lyons, 1971). The scale consists of three items designed to measure withdrawal behaviour. These three items refer to (1) how long subjects would like to remain in their present place of employment, (2) whether they would continue to work in the place of present employment if they were given the freedom of choice, and (3) whether they would return to their present place of employment if, for some reason, such as ill-health or pregnancy, they had to leave for a period of time.

Although the scale is entitled 'Propensity to Leave', the three items actually assess the potential of the subject to stay within the employing organisation. The original format of the scale makes use of a five-point Likert scale, but in accordance with past research (Bluen, 1986), and in order to facilitate ease of response (Morris & Van der Reiss, 1980), a three-point

Likert format was used in the present study for the first two items. Thus, for these two items the response format ranged from "no" (1), through "not sure" (2), to "yes" (3). For the final item a six-point Likert response format was used in order to maximise response range (Steyn, 1986). For this item the response format ranged from "one year" (1) through to "more than 10 years" (6).

Another change from the original format of the scale was the substitution of the word "hospital", in the original items, with the word "organisation". The scale was originally designed to assess the propensity of nurses to leave the hospital in which they were employed. Rousseau (1978), when using the scale in an organisational context substituted the word "hospital" with "organisation". Thereafter, when the scale was used in the organisational context, the items were modified in the same manner.

In terms of the psychometric properties of the scale, Lyons (1971) reported a Spearman Brown internal reliability coefficient of .81. Bluen (1986) reported a coefficient alpha of .77 on a South African sample. In the present study, internal reliability of .82 was obtained. In terms of construct validity, Lyons (1971) reported a pearson correlation coefficient of -.27 with a measure of role clarity. Brief and Aldag (1976) reported significant correlations with a scale of role ambiguity ($r = .25$) and with a scale of role conflict ($r = .23$). Although all the above reported correlations were obtained with samples of nursing employees, satisfactory psychometric properties have also been obtained with samples of organisational employees (eg. Rousseau, 1978).

PSYCHOLOGICAL WELL-BEING

Psychological well-being was assessed by using the General Health Questionnaire (Goldberg, 1972). The General Health Questionnaire (GHQ) is a self administered screening test which enables the assessment of minor psychiatric disorders in community settings. The focus of the questionnaire is on psychological components of ill-health where the subjects evaluate their present psychological state by comparing it to their usual psychological state. Thus, the questionnaire focuses on symptoms as opposed to traits. The original form of the GHQ consists of sixty items. However, Goldberg (1972) provided shortened versions of the scale by identifying the "best" thirty, twenty and twelve items, these shortened versions being administered when the respondent's time is at a premium. In the present study the twelve-item format was used. Each item enquires whether the respondent has recently experienced a particular symptom or item of behaviour with responses ranging on a scale from - "less than usual" (1) through to "much more than usual" (4). According to Goldberg (1972), such a response range avoids the error of overall agreement that arises when bimodal response

scales are used, also eliminating the "error of central tendency".

Goldberg (1972) also suggested two scoring procedures. With the first scoring procedure, known as the General Health Questionnaire-method, if the respondent endorsed the first or second category, a score of zero would be assigned. If the respondent endorsed the third or fourth category, a score of one would be assigned. With the second procedure, a Likert-method would be used, with respondents given scores ranging from one to four for the respective categories.

In the present study the second method was adopted as it has been shown that this method provides a more acceptable distribution of scores in parametric analysis (Banks, Clegg, Jackson, Kemp, Stafford and Wall, 1980). This method is also used to overcome the potential problems associated with a truncated range (Bluen, 1986). For both scoring procedures comparable reliability and validity characteristics were obtained (Goldberg, 1972).

In terms of the psychometric properties of the GHQ, Goldberg (1972) reports that the scale demonstrates satisfactory test-retest reliability over a period of six months and acceptable split-half reliability. In an investigation of the scale's utility within an organisational context Banks *et al.* (1980) found that the GHQ exhibited satisfactory psychometric properties similar to those demonstrated in a clinical setting. Specifically, when administered to three samples, namely, a sample of employees, a sample of school leavers and a sample of unemployed men, satisfactory alpha coefficients of between .82 and .90 were recorded. In addition, the GHQ demonstrated a sensitivity to sex differences and employment status although it was found to be unrelated to age, job level and marital status (Banks *et al.*, 1980). When used within the South African organisational context at separate time intervals, (See Bluen, 1986), acceptable internal consistency was reported (.91 - Cronbach's alpha time one, and .93 - Cronbach's alpha time two). In the present study, internal reliability was confirmed (standardized alpha = .83).

SELF-ESTEEM

Self-esteem was measured using Quinn and Shepard's (1974) four item Self-Esteem at Work scale. Items refer to self-esteem within a job-related context and are bipolar adjectival descriptors separated by a seven-point continuum. Respondents are thus asked to rate the extent to which they feel they are 'not successful/successful', 'not important/important', 'not doing their best/doing their best', and 'sad/happy', on a scale one to seven. A high score represents high self-esteem while a low score represents low self-esteem.

In the initial study using 1496 respondents, 38% of whom were females, a coefficient alpha of .70 was reported. Construct validity was also demonstrated with the scale correlating significantly with Depressed Mood at Work (r = .44), Life Satisfaction (r = .48) and Overall Job Satisfaction (r = .50). In the present study reliability of the Self-Esteem scale was confirmed (standardised alpha = .70).

THE INDEPENDENT VARIABLES

ROLE AMBIGUITY

Role ambiguity was assessed using the six-item Role ambiguity scale developed by Rizzo, House and Lirtzman (1970). The authors of the scale defined role ambiguity in terms of the predictability of the outcomes of one's behaviour and the existence of guidelines that provide knowledge that enable one to determine if one is behaving appropriately. The original response format is on a seven-point dimension. However, for ease of response and scoring, a three point format ie. 'false' (1), 'unsure' (2) and 'true' (3) was used in the present study (Morris and Van der Reis, 1980).

A Kuder-Richardson reliability coefficient of .78 and .81 was reported by Rizzo *et al.* (1970) when the scale was administered to two samples of managerial and technical employees (N =199 and N = 91). Although Rizzo *et al.* (1970) do not report on the temporal consistency of the scale, other researchers have reported significant test-retest reliability correlations for the scale (Cook, Hopworth, Wall and Warr, 1981). In addition Cook *et al.* (1981) report that numerous researchers have demonstrated significant measures of internal consistency for the Role Ambiguity Scale. When used on a South African sample, (See Bluen, 1986), a Cronbach's alpha reliability coefficient of .72 was obtained. In the present study the reliability of the scale was confirmed (standardised alpha = .75).

ROLE CONFLICT

Role conflict was measured using the eight-item Role conflict scale developed by Rizzo, House and Lirtzman (1970). The authors of the scale viewed role conflict in terms of the incompatibility of demands which could occur in the form of conflict between organisational demands and one's own values, problems of personal resource allocation, conflict between obligations to several other people and conflict between numerous or difficult tasks. Following Kahn, Wolfe, Quinn, Snoek and Rosenthal (1964) this last feature incorporates an additional feature of role stress, namely, role overload.

Each item within the scale consists of a statement pertaining to the respondent's work role (eg., 'I have to do things that should be done differently', 'I work on unnecessary things'). In the present study the American colloquial expression 'to buck a rule' was altered to enhance the understanding of the scale when used on a South African sample. In addition the word 'apt' was replaced by that of 'likely' in item number six as the latter word was felt to be more readily understandable than the former. The original scale scored responses along a seven point dimension. However, the present study used a three-point format ranging from 'false' (1) to 'unsure' (2) through to 'true' (3), in order to simplify responses (Morris and Van der Reis, 1996).

Rizzo *et al.*, (1970) report Kuder-Richardson reliability coefficients of .82 each for two samples of managerial and technical employees (N = 199 and N =91). Cook, Hepworth, Wall and Warr report that high measures of internal reliability have been found by numerous researchers for the Role Conflict Scale. When administered on a South African sample a Cronbach's alpha reliability coefficient of .69 was reported (N = 51) (Bluen, 1986). In the present study a Cronbach's alpha of .81 was obtained. Although the developers of the scale did not report on the temporal consistency of their measure of conflict, other researchers have found significant test-retest reliability for the measure (Cook *et al.*, 1981).

Thus, the Role Conflict scale demonstrates acceptable psychometric properties. In addition, this scale is the most widely used conflict scale in role stress research (Schuler *et al.*, 1977). Its utilisation in the present study was, therefore, considered to be appropriate.

ROLE OVERLOAD

Role overload was measured using the Subjective Quantitative Work Load scale (SQWL) developed by Caplan (1971). The SQWL taps an important aspect of the stress phenomenon in that stress has been shown to occur when the individual perceives an imbalance to exist between the perceived environmental demand and the individual's perceived capability to deal with the demand (Chalmers, 1981, Cox and Mackay, 1978).

The scale consists of nine items scored along a five-point response format. Respondents are asked to rate various aspects of their jobs in terms of their perception of task overload with the response rate for these items ranging from 'very little' (1) through to 'very great' (5). Caplan, Cobb and French (1975) report a Chronbach alpha reliability coefficient for the SQWL of .87. When used on a South African sample, (See Strumpfer, 1989), the scale displayed adequate psychometric properties. In the present study the scale's reliability was confirmed (standardised alpha = .77).

THE MODERATOR VARIABLE

SUPERVISOR SOCIAL SUPPORT

Supervisor social support was assessed by means of the Four Factor Supervisor Social Support scale, the development of which is described in the previous chapter. The original scale consisted of twenty-three items all of which described events that pertained to various aspects of the relationship between a subordinate and his or her supervisor. Respondents were required to rate the extent to which a particular event had occurred or would occur, with responses being scored along a five-point response range, namely, 'never' (1) to 'hardly ever' (2) to 'some of the time' (3) to' most of the time' (4) to 'all of the time' (5). Two items were reverse scored in order to avoid response set bias (item numbers 17 and 23). However as a result of the factor analysis conducted and described in the previous chapter, one of the original twenty-three items was dropped (item number 6). Thus, the final form of the scale consisted of twenty-two items. Reverse scored items were, subsequently, item number 16 and item number 22.

In terms of the psychometric properties of the instrument, those reported in the previous chapter were considered to be adequate. Temporal consistency, calculated over an eight week period was considered to be satisfactory ($r = .82$; $p < 0.05$). In addition, internal consistency of the four subscales were found to be satisfactory (Emotional support - $\alpha = .93$; Appraisal support - $\alpha = .83$; Instrumental support - $\alpha = .83$; Informational support - $\alpha = .66$). Convergent validity was also demonstrated with the Four Factor Supervisor Social Support Scale correlating significantly and in the expected direction with other measures of supervisory leadership and satisfaction with supervision ($r = .71$; and $r = .75$) respectively.

On the basis of the scale's demonstration of adequate psychometric properties, it's inclusion as the measure of assessment of supervisor social support in the present study, was considered to be appropriate.

STATISTICAL ANALYSIS

MODERATED MULTIPLE REGRESSION

The statistical technique of Moderated Multiple Regression (MMR) was selected for the analysis of data in the present study. This technique developed by Saunders (1956) from standard multiple regression was chosen above other techniques (eg. Anova and Subgrouping analysis) for a number of reasons.

Firstly it was chosen above the technique of Anova because of its ability to include an interaction term (Zedeck, 1971). Inclusion of the interaction term provides researchers with information about the main and moderating effects of a moderator in the relationship between each independent and dependent variable.

Secondly, it was chosen above the use of the technique of Subgrouping Analysis as, although the latter is also able to detect moderator effects and is widely used in psychological research, there are a number of problems inherent in using this method (Cohen, 1978; Stone and Hollenbeck, 1984; Zedeck, Cranny, Vale and Smith, 1971). Subgrouping analysis entails the separation of the sample into subgroups of the moderator variable (e.g high versus low), determining the relationship between the independent and dependent variables and the comparison of the results obtained for each of the subgroups. This separation of the sample is, however, arbitrarily determined, thus increasing the probability of obtaining spurious results. In addition, as quantitative variables are converted into categorical variables, information is subsequently degraded, statistical power is reduced (since data from selected subsets only is compared), and information from the subgroups whose data is not analysed is wasted (Stone and Hollenbeck, 1984; Zedeck *et al.*, 1971). Finally, it has been demonstrated that subgrouping analysis often produces conflicted and initiated findings concerning moderator variables (Stone and Hollenbeck, 1984).

The technique of MMR is able to overcome many of these problems (Zedeck, 1971). There are three advantages of MMR over the technique of subgrouping analysis. *Firstly*, MMR entails prediction equations for the total sample and does not rely on subgrouping. *Secondly*, it yields greater information regarding the main and interaction effects of the moderator variable. *Thirdly*, it allows for the analysis of non-linear variables.

Furthermore, Stone and Hollenbeck (1984) found that MMR was able to detect moderator effects even when the data base had strong main effects for both independent and moderator variables, the dependent variables had large error components, the reliabilities for independent and moderator variables were low and/or the independent and moderator variables were partially mulitcolinear; thus indicating that MMR is truly a robust technique (Stone and Hollenbeck, 1984).

Consequently, on the basis of the above described strengths inherent in the technique of MMR, and as the aim of the present study was to assess the moderating and main effect of social support in the relationship between role stress and four indicators of job-related strain, the utilisation of MMR was considered to be appropriate.

As mentioned, Moderated Multiple Regression is a form of standardised multiple regression. The latter technique allows for the assessment of the relationship between a dependent variable (Y) or criterion variable and a set of predictor or independent variables (X_1 , X_2 , X_n, etc.). The dependent variable in standard multiple regression is regarded as a function of a set of independent variables. However, MMR differs from standard multiple regression in that it includes an interaction term in the equation. The interaction term is defined as the joint effect of two variables accounting for the variance in the dependent variable, over and above the additive combination of their separate main effects (Cohen, 1978).

The aim of MMR is to test for significance, the percentage of explained variance in each of the dependent variables due to the independent variable, the purported moderator variable and the interaction term. This technique, by its inclusion of the interaction term, thus offers a more complete explanation of the dependent variable, since few phenomena are produced by a single independent variable. In fact, use of this technique enables the evaluation of the contribution of a specific independent variable with greater certainty, since the distorting effect of relevant independent variables are taken into account (Gleary and Kessler, 1982; Lewis-Beck, 1980).

There are two basic concepts that underlie an interaction approach, namely, the **main effect** concept and the **moderator effect** concept. A main effect occurs when the effect of the independent variable is constant, despite the presence or absence of any other variables or moderating influences. A moderator effect, on the other hand, is the effect of an independent variable that varies as a function of the presence or absence of an additional independent or modifying variable (Finney, Mitchell, Cronkite and Moos, 1984). Thus this third variable (Z) is said to moderate the relationship between the independent and dependent variables (X and Y) when the "degree of association between X and Y varies as a function of the value assumed by Z" (Stone and Hollenbeck, 1984, p. 196).

MMR is able to assess both effects through the use of an hierarchical analytical strategy that first assesses main effects, then partials them out to assess moderator effects (Pedhazur, 1982). Thus the effects of the independent variable (X) and the moderator variable (Z) are first assessed, then automatically partialled out as they are entered before the interaction term (X*Z) (Suchet, 1984).

The significance of the interaction term is then assessed using the standard F-test and comparing the derived F-values with tabled F-values (McNemar, 1962). A .05 level of significance is applied in determining the presence of a moderator (Zedeck *et al.*, 1971). The

formula 1/(n-k-1) is then used to determine the degrees of freedom, where k represents the number of variables in the moderated multiple regression analysis, that is, the main effects and the interaction effect (Pedhazur, 1982). A significant interaction shows that the regression of Y on X is dependent on the moderator variable (Z).

From the above discussion, it can be seen that moderated multiple regression is the appropriate technique for the present study. The technique has been widely used in the behavioural sciences as it permits the analysis of virtually any set of quantitative data, being especially appropriate where models of behaviour are assumed to have both main and moderating effects (Finney, Mitchell, Cronkite and Moos, 1984, Lewis-Beck, 1980). Consequently, it was the statistical method of choice in the present study.

When applying moderated multiple regression, separate regression equations were computed for each dependent variable, namely, job satisfaction, propensity to leave one's job, psychological well-being and self-esteem. More specifically, for each dependent variable analysis, the first step was to enter one of the three independent variables, namely, role ambiguity, role conflict or role overload. This would be followed by the moderator, namely, each of the hypothesised types of supervisor social support, followed by the interaction term consisting of the one independent variable (role ambiguity or role conflict or role overload) x each hypothesised type of supervisor social support. For these separate analyses, the .05 level of significance was selected to determine the presence of significant effects. This cut-off point was deemed as acceptable as MMR is recognised as a robust and stringent procedure (La Rocco *et al.*, 1980).

If significant moderator effects were found, the direction of this effect would be determined by plotting sub-group means. As mentioned previously, although subgrouping entails a loss of information and accuracy, as it was not to be used as the means of analysis in the present study, its use to reflect the direction of significant interactions was considered to be appropriate. In fact Hunt, Osborn and Larson (1975) state that the absolute values in the interaction diagrams are not as important as an indication of the general direction of the interaction.

However, before going on to compute moderated multiple regression analyses, the **assumptions** underlying this statistical technique had to be assessed. These assumptions refer to the relationship between the biographical variables and the dependent variables, the presence of a linear relationship between independent and dependent variables, no measurement error and the absence of multicollinearity. In the following section each of these

assumptions will be separately addressed.

RELATIONSHIP OF BIOGRAPHICAL VARIABLES

When using MMR it is assumed that the biographical variables are not related to the dependent variables. If this is found to be so, that is, if a significant relationship is indicated between any biographical variable and any dependent variable, the biographical variable must then be included as a covariate in the moderated multiple regression equation. This is done in order to assess the extent to which the biographical variable is contributing to any variance obtained in the dependent variable, thus reducing the chance of obtaining spurious results (Ballentine, 1988; Bluen, 1986). Three statistical procedures are used to determine if any such significant relationships exist. These are t-tests, conducted for categorical variables with two levels; one-way analysis of variance, performed for multiple level, discrete biographical variables and pearson correlation coefficients, calculated for continuous variables (Bluen, 1986).

LINEARITY

Use of MMR requires the relationship between the independent and dependent variables to be linear. Linearity tests are applied which assess whether a linear relationship exists between each independent and dependent variable. This is done by creating a breakdown of between group sum of squares into that portion due to linearity and that portion due to deviation from linearity (Bluen, 1986). The F test of significance and the degrees of freedom are then used to determine the significance of linear and non-linear values.

The F-test of significance is based on the equation:

$$F = \frac{(\eta^2 - r^2)/(G - 2)}{(1 - \eta^2)/(N - G)}$$

Where: η = eta (correlation ratio)

r = correlation coefficient

G = number of grouping intervals

N = sample size

Degrees of freedom = (N - G) and (G - 2)

(Bluen, 1986).

If a significant F is found this indicates that there is a deviation from linearity and the linearity assumption is then said to be violated. When this occurs, polynomial regression is applied to transform the variable and comply with the linearity assumption. Polynomial regression is a form of multiple regression, but it includes successive powers of the independent variable. Using this technique, analysis is done hierarchically, with each successive step adding a higher order polynomial to the equation (Pedhazur, 1982). The highest order term found to add significantly to the previously explained variance of the dependent variable then replaces the original non-linear variable in the regression equation.

The polynomial regression equation is as follows:

$$y = a + b_1 x_1 + b_2 x_2^2 + \ldots\ldots b_k x_1^k$$

(Pedhazur, 1982)

MEASUREMENT ERROR

The third assumption of MMR is that no measurement error exists. While it is impossible to eliminate all measurement error there is a need to assess the extent to which measurement error does exist as this reflects on the extent to which the measurement of data and the estimates yielded by this data, are accurate. The extent of measurement error can be determined by calculating the reliability of all instruments used in the present study. This is done through the use of Cronbach's alpha formula with coefficients above the .60 level being considered to be acceptable (Anastasi, 1982).

MULTICOLINEARITY

Multicollinearity refers to the extent to which the independent variables are related to one another. Variables are said to be multicolinear when correlations between them are too high (ie. $r > .80$; Pedhazur, 1982). The calculation of Pearson correlation coefficients allows for the assessment of the relationship between the independent variables. If no correlations greater than .80 are found to exist it can then be assumed that multicollinearity does not exist (Pedhazur, 1982). Once these assumptions are assessed and none are found to be violated the computation of MMR can then follow.

The following section deals with the findings of the various assumption tests within the present study. Thereafter, the results of the moderated multiple regression analyses are presented.

RESULTS

RESULTS OF ASSUMPTION TESTS

RELATIONSHIP OF BIOGRAPHICAL VARIABLES

As biographical variables such as age, sex, race, language, years of education, marital status, the number of children one has, the organisation in which one works and the position one holds within the organisation may be significantly related to the dependent variables, it is important to assess their relationship (Pedhazur, 1982).

In order to assess these relationships, three procedures were selected. T-tests were conducted for the variables of sex and organisation as each was a discrete variable with two categories (See Table 6.2). One-way analyses of variance were conducted for language, race, marital status, branch of the organisation in which the individual is employed and position in the organisation (grading) as these variables were discrete variables with multiple levels (See Table 6.3). In addition, Pearson correlations were computed between the continuous variables of age, number of children and years of education and the dependent variables (See Table 6.4).

Results indicated that the organisation in which one works was related to all the dependent variables, namely, job satisfaction propensity to leave, psychological well-being and self-esteem. In turn, the branch in which one worked was related to the dependent variables of propensity to leave, self-esteem and job satisfaction. The position that one held within the organisation was related to job satisfaction, propensity to leave, psychological well-being and self-esteem. Finally, marital status was related to self-esteem and race and home language spoken by respondents was related to job satisfaction. No significant relationships were reported between the biographical variables of age, education, the number of children one had, sex and the dependent variables (See Tables 6.2, 6.3, and 6.4). On the basis of these findings, demographic variables pertaining to the organisation and branch in which one works, the position that one holds within the organisation, race, language and marital status, were included as covariates in the relevant regression equations. This was done in order to control for spuriousness that could arise due to the contribution by the covariates to variance in the dependent variables (Bluen, 1986; Neale and Liebert, 1980).

TABLE 6.2 T-tests for the Dichotomous Demographic Variables for the Dependent Variables

Dependent Variable		Organization			
		One	Two	Male	Female
Job Satisfaction	n	231	38	80	189
	M	69.0	80.68	70.66	70.66
	t	-3.64*		0.002	
Propensity to Leave	n	241	41	85	197
	M	7.96	9.20	7.76	8.30
	t	-2.45*		-1.37	
Self Esteem	n	241	41	85	199
	M	20.85	22.90	20.50	21.42
	t	-3.29*		-1.55	
Psychological Well-being	n	241	41	83	199
	M	23.78	21.71	23.23	23.60
	t	2.32*		-0.51	

*p < .05

TABLE 6.3 One-way Analyses of Variance of Demographic Variables for the Dependent Variables

Dependent Variable		Language	Marital Status	Gender	Ethnicity	Race
Job Satisfaction	F	2.47*	1.76	5.91*	3.16*	5.22
	df	5/263	3/264	5/263	7/133	3/264
Propensity to Leave	F	0.98	2.04	5.01*	2.38*	2.07
	df	6/275	3/277	5/276	7/139	3/277
Self Esteem	F	1.97	2.65*	3.46*	2.27*	2.54
	df	6/277	3/279	5/278	7/138	3/279
Psychological Well-being	F	1.89	2.45	1.36	2.11*	0.01
	df	6/275	3/277	5/276	7/138	3/277

*p < .05

TABLE 6.4 **Pearson Correlation Coefficients of Dependent Variables, and Continuous Demographic Variables**

	1	2	3	4	5	6	7
Dependent Variables							
1. Job Satisfaction	--						
2. Propensity to Leave	.73***	--					
3. Self-Esteem	.72***	.68***	--				
4. Psychological Well-Being	-.60***	-.52***	-.60***	--			
Demographic Variables							
5. Age	.20***	.15**	.19**	-.17**	--		
6. Number of Children	.10	.09	.09	-.11		--	
7. Years of Education	-.11	-.12*	-.06	.03			--

*p < .05
**p < .01
***p < .001

LINEARITY

Tests for linearity were conducted for role ambiguity, role conflict, role overload and the four subscales of supervisor social support with every dependent variable. Results revealed that the relationships were all linear as examination of the relevant F-value in each instance suggested that all relationships between the dependent and independent variables did not deviate significantly from linearity. Therefore, the assumption of linearity was seen to be satisfied (See Appendix F for statistical results).

MEASUREMENT ERROR

In order to assess the presence of measurement error, internal consistency reliability tests were conducted. Standardised alpha's for all the scales used in the present study are reported in Table 6.5. Examination of this table shows that the internal capability coefficients were most satisfactory (Mean alpha = .83; range = .70 -.95). Therefore, taking into account the calculated internal reliability coefficient scores obtained int he present study and the previously reported reliability and validity of the instruments used (see discussion on Measuring Instruments), the assumption of no error was deemed to be fulfilled.

TABLE 6.5 Internal Consistency of Measuring Instruments

Measuring Instruments	No. of Items	Item Range		M	SD	Alpha
		Min	Max			
Role Conflict	8	1	3	13.85	4.54	.81
Role Ambiguity	6	1	3	8.74	2.56	.75
Work Overload	9	1	5	29.41	5.59	.77
Job Satisfaction	16	1	7	70.65	18.74	.93
Propensity to Leave*	3	1	3/6	8.13	3.01	.82
Self-Esteem	4	1	7	21.14	4.63	.70
Psychological Well-being	12	1	4	23.48	5.35	.83

* For the Propensity to Leave scale, items 2 and 3 are scored on a three-point scale, item 1 is scored on a six-point scale. A high score on this scale indicates the potential of a subject to *stay* employed.

MULTICOLINEARITY

Multicollinearity was assessed by computing the relationship between the independent and moderator variables using pearson correlation coefficients. Results indicated that there was no correlation above .74 between the independent and moderator variables. Therefore, the assumption of mulitcolinearity remained unchallenged (See Table 6.6).

As all the assumptions underlying moderated multiple regression were, thus, shown to be satisfied, the computing of MMR could then be conducted. The results of these analyses conducted for each independent variable are presented in the following section.

TABLE 6.6 **Pearson Correlation Coefficients for the Independent and Moderator Variables**

		1	2	3	4	5	6	7
Moderator Variables								
1	Emotional Supervisor Social Support	--						
2	Informational Supervisor Social Support	.65***	--					
3	Instrumental Supervisor Social Support	.67***	.56***	--				
4	Appraisal Supervisor Social Support	.74***	.58***	.62***				
Independent Variables								
5	Role Ambiguity	-.46***	-.43***	-.39***	-.54***	--		
6	Role Conflict	-.44***	-.36***	-.38***	-.38***	.38***	--	
7	Work Overload	-.08	-.09	-.19***	-.04	.00	.37***	--

*p < .05
**p < .01
***p < .001

RESULTS OF MODERATED MULTIPLE REGRESSION ANALYSES

JOB SATISFACTION

Job satisfaction was regressed onto the covariates of organisation, branch of organisation, position held within organisation (grading level), race and language, followed by role ambiguity and emotional supervisor social support. An interaction term of role ambiguity x emotional supervisor social support followed thereafter. Two significant findings emerged. Role ambiguity had a significant main effect on job satisfaction ($F(1;235) = 56.39$, $p < .05$) explaining 21% of the variance. In addition, emotional supervisor social support had a significant main effect on job satisfaction ($F(1;235) = 47.98$, $p < .05$) explaining 20% of the variance. Results of the moderated multiple regression for job satisfaction on role ambiguity and emotional supervisor social support are presented in Table 6.7.

TABLE 6.7 Moderated Multiple Regression for Job Satisfaction on Perceived Role Ambiguity and Emotional Supervisor Social Support.

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.04	0.04	-	3.91
Branch	0.10	0.06	-	7.22
Grading	0.17	0.07	-	7.02
Race	0.22	0.05	-	6.33
Language	0.25	0.03	-	6.83
Role Ambiguity	0.46	0.21	-0.06	56.39*
Emotional SS	0.66	0.20	1.64	47.96*
RA x EMO SS	0.66	0.00	-0.05	1.64

*p < .05

Job satisfaction was regressed onto the covariates of organisation, branch of organisation, position held within organisation (grading level), race and language, followed by role ambiguity and informational supervisor social support. An interaction term of role ambiguity x informational supervisor social support followed thereafter. Two significant findings emerged. Role ambiguity had a significant main effect on job satisfaction ($F(1;240) = 37.67$, $p < .05$) explaining 21% of the variance. In addition, informational supervisor social support had a significant main effect on job satisfaction ($F(1;240) = 3.31$, $p < .05$) explaining 1% of the variance. Results of the moderated multiple regression for job satisfaction on role ambiguity and informational supervisor social support are presented in Table 6.8.

TABLE 6.8 Moderated Multiple Regression for Job Satisfaction on Perceived Role Ambiguity and Informational Supervisor Social Support.

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.04	0.04	-	4.20
Branch	0.10	0.06	-	5.70
Grading	0.17	0.07	-	4.38
Race	0.22	0.05	-	3.25
Language	0.25	0.03	-	4.64
Role Ambiguity	0.46	0.21	-0.55	37.67*
Informational SS	0.47	0.01	4.34	3.31*
RA x INF SS	0.47	0.00	-0.30	1.12

*p < .05

Job satisfaction was then regressed onto the same covariates outlined above followed by role conflict and emotional supervisor social support. An interaction term of role conflict x emotional supervisor social support then followed. Two significant findings were observed. Role conflict had a significant main effect on job satisfaction ($F(1;234) = 21.99$, $p < .05$) accounting for 10% of the variance. Emotional supervisor social support also had a main effect on job satisfaction ($F(1;234) = 67.65$, $p < .05$), accounting for 18% of the variance. Results of the moderated multiple regression for job satisfaction on role conflict and supervisor social support are presented in Table 6.9.

TABLE 6.9 Moderated Multiple Regression for Job Satisfaction on Perceived Role Conflict and Emotional Supervisor Social Support.

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.04	0.04	-	3.82
Branch	0.10	0.06	-	6.75
Grading	0.17	0.07	-	7.02
Race	0.22	0.05	-	7.24
Language	0.25	0.03	-	4.85
Role Conflict	0.35	0.10	-0.00	21.99*
Emotional SS	0.53	0.18	1.52	67.65*
RC x EMO.SS	0.53	0.00	-0.00	0.08

*$p < .05$

Job satisfaction was then regressed onto the same covariates outlined above followed by role conflict and informational supervisor social support. An interaction term of role conflict x informational supervisor social support then followed. Two significant findings were observed. Role conflict had a significant main effect on job satisfaction ($F(1;239) = 14.98$, $p < .05$) accounting for 10% of the variance. Informational supervisor social support also had a main effect on job satisfaction ($F(1;239) = 2.90$, $p < .05$), accounting for 3% of the variance. Results of the moderated multiple regression for job satisfaction on role conflict and supervisor social support are presented in Table 6.10.

TABLE 6.10 **Moderated Multiple Regression for Job Satisfaction on Perceived Role Conflict and Informational Supervisor Social Support.**

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.04	0.04	-	4.01
Branch	0.10	0.06	-	4.85
Grading	0.17	0.07	-	4.04
Race	0.22	0.05	-	3.46
Language	0.25	0.03	-	3.44
Role Conflict	0.35	0.10	1.13	14.98*
Informational SS	0.39	0.03	6.03	2.90*
RC x INF SS	0.38	0.00	-0.25	0.94

*p < .05

Job satisfaction was, once again, regressed onto the same covariates used in the above analyses, followed by role overload and emotional supervisor social support. An interaction term of role overload x emotional supervisor social support then followed. Two significant findings emerged. Role overload was shown to have a significant main effect on job satisfaction ($F(1;236) = 1.95$, $p < .05$) accounting for 1% of the variance, while emotional supervisor social support had a significant main effect on job satisfaction ($F(1;236) = 89.10$, $p < .05$) accounting for 37% of the variance. Results for the moderated multiple regression of job satisfaction on role overload and supervisor social support are presented in Table 6.11.

TABLE 6.11 **Moderated Multiple Regression for Job Satisfaction on Perceived Role Overload and Emotional Supervisor Social Support.**

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.04	0.04	-	3.93
Branch	0.10	0.06	-	6.77
Grading	0.17	0.07	-	7.04
Race	0.22	0.05	-	7.26
Language	0.25	0.03	-	4.86
Role Overload	0.26	0.01	-0.10	1.95*
Emotional SS	0.63	0.37	1.35	89.10*
RO x EMO SS	0.63	0.00	0.00	0.87

*p < .05

Job satisfaction was finally regressed onto the same covariates used in the above analyses, followed by role overload and instrumental supervisor social support. An interaction term of

role overload x instrumental supervisor social support then followed. Two significant findings emerged. Role overload was shown to have a significant main effect on job satisfaction ($F(1;238) = 1.22$, $p < .05$) accounting for 1% of the variance, while instrumental supervisor social support had a significant main effect on job satisfaction ($F(1;238) = 45.53$, $p < .05$) accounting for 17% of the variance. Results for the moderated multiple regression of job satisfaction on role overload and supervisor social support are presented in Table 6.12.

TABLE 6.12 **Moderated Multiple Regression for Job Satisfaction on Perceived Role Overload and Instrumental Supervisor Social Support.**

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.04	0.04	-	3.81
Branch	0.10	0.06	-	5.72
Grading	0.17	0.07	-	4.93
Race	0.22	0.05	-	4.25
Language	0.25	0.03	-	3.68
Role Overload	0.26	0.01	-0.70	1.22*
Instrumental SS	0.43	0.17	1.71	45.53*
RO x INS SS	0.43	0.00	0.04	0.85

*$p < .05$

PROPENSITY TO LEAVE

Propensity to leave was regressed onto the covariates organisation, branch and grading, followed by role ambiguity and emotional supervisor social support. An interaction term of role ambiguity x emotional supervisor social support followed. Two significant effects were reported. Role ambiguity had a significant main effect on propensity to leave ($F(1;257) = 49.32$, $p < .05$), accounting for 19% of the variance. In addition, emotional supervisor social support had a significant main effect on propensity to leave ($F(1;257) = 49.39$, $p < .05$), accounting for 22% of the variance. Results for the moderated multiple regression of propensity to leave on role ambiguity and emotional supervisor social support are presented in Table 6.13.

TABLE 6.13 **Moderated Multiple Regression for Propensity to Leave on Perceived Role Ambiguity and Emotional Supervisor Social Support.**

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.02	0.02	-	2.16
Branch	0.08	0.06	-	7.58
Grading	0.12	0.04	-	2.90
Role Ambiguity	0.31	0.19	0.17	49.32*
Emotional SS	0.53	0.22	0.30	49.39*
RA x EMO SS	0.53	0.00	-0.01	3.14

*p < .05

Propensity to leave was regressed onto the covariates organisation, branch and grading, followed by role ambiguity and informational supervisor social support. An interaction term of role ambiguity x informational supervisor social support followed. Two significant effects were reported. Role ambiguity had a significant main effect on propensity to leave ($F(1;263) = 40.14$, $p < .05$), accounting for 19% of the variance. In addition, informational supervisor social support had a significant main effect on propensity to leave ($F(1;263) = 2.90$, $p < .05$), accounting for 2% of the variance. Results for the moderated multiple regression of propensity to leave on role ambiguity and informational supervisor social support are presented in Table 6.14.

TABLE 6.14 **Moderated Multiple Regression for Propensity to Leave on Perceived Role Ambiguity and Informational Supervisor Social Support.**

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.02	0.02	-	2.89
Branch	0.08	0.06	-	5.77
Grading	0.12	0.04	-	1.72
Role Ambiguity	0.31	0.19	-0.22	40.14*
Informational SS	0.33	0.02	0.52	2.90*
RA x INF SS	0.33	0.00	-0.03	0.20

*p < .05

A further statistical analysis for the dependent variable of propensity to leave was undertaken. The dependent variable was regressed onto the same covariates as outlined above, followed

by the independent variable of role conflict and the moderator variable of emotional supervisor social support. An interaction term of role conflict x emotional supervisor social support then followed. Two significant findings emerged, namely, role conflict which was found to have a significant main effect on propensity to leave ($F(1;258) = 21.20$, $p < .05$), accounting for 9% of the variance, and emotional supervisor social support which was found to have a main effect on the dependent variable ($F(1;258) = 63.00$, $p < .05$), accounting for 29% of the variance. Results for the moderated multiple regression of propensity to leave on role conflict and emotional supervisor social support are presented in Table 6.15.

TABLE 6.15 Moderated Multiple Regression for Propensity to Leave on Perceived Role Conflict and Emotional Supervisor Social Support.

Variable Entered Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.02	0.02	-	2.91
Branch	0.08	0.06	-	6.99
Grading	0.12	0.04	-	2.87
Role Conflict	0.21	0.09	-0.03	21.20*
Emotional SS	0.50	0.29	0.21	63.00*
RC x EMO SS	0.50	0.00	0.00	0.79

*$p < .05$

Propensity to leave was regressed onto the covariates organisation, branch and grading, followed by role conflict and informational supervisor social support. An interaction term of role conflict x informational supervisor social support then followed. Two significant findings emerged, namely, role conflict which was found to have a significant main effect on propensity to leave ($F(1;264) = 15.21$, $p < .05$), accounting for 9% of the variance, and informational supervisor social support which was found to have a main effect on the dependent variable ($F(1;264) = 2.65$; $p < .05$), accounting for 2% of the variance. Results for the moderated multiple regression of propensity to leave on role conflict and informational supervisor social support are presented in Table 6.16.

TABLE 6.16 Moderated Multiple Regression for Propensity to Leave on Perceived Role Conflict and Informational Supervisor Social Support.

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.02	0.02	-	3.01
Branch	0.08	0.06	-	4.87
Grading	0.12	0.04	-	1.54
Role Conflict	0.21	0.09	0.06	15.21*
Informational SS	0.23	0.02	0.74	2.65*
RC x INF SS	0.23	0.00	-0.02	0.03

*p < .05

Propensity to leave was then regressed onto the covariates of organisation, branch, and grading followed by role overload and emotional supervisor social support. An interaction term of role overload x emotional supervisor social support then followed. Only one significant finding was demonstrated, that is, emotional supervisor social support was found to have a main effect on the dependent variable ($F(1;258) = 81.89$, $p < .05$), accounting for 38% of the variance. Results for the moderated multiple regression of propensity to leave on role overload and emotional supervisor social support are presented in Table 6.17.

TABLE 6.17 Moderated Multiple Regression for Propensity to Leave on Perceived Role Overload and Emotional Supervisor Social Support.

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.02	0.02	-	2.55
Branch	0.08	0.06	-	6.90
Grading	0.12	0.04	-	2.83
Role Overload	0.12	0.00	0.03	0.35
Emotional SS	0.50	0.38	0.24	81.89*
RO x EMO SS	0.50	0.00	-0.00	0.06

*p < .05

Finally, propensity to leave was regressed onto the covariates of organisation, branch, and grading followed by role overload and instrumental supervisor social support. An interaction term of role overload x instrumental supervisor social support then followed. Only one significant finding was demonstrated, that is, instrumental supervisor social support was found to have a main effect on the dependent variable ($F(1;261) = 20.94$, $p < .05$), accounting for

13% of the variance. Results for the moderated multiple regression of propensity to leave on role overload and instrumental supervisor social support are presented in Table 6.18.

TABLE 6.18 Moderated Multiple Regression for Propensity to Leave on Perceived Role Overload and Instrumental Supervisor Social Support.

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.02	0.02	-	2.71
Branch	0.08	0.06	-	5.01
Grading	0.12	0.04	-	1.57
Role Overload	0.12	0.00	0.00	0.53
Instrumental SS	0.25	0.13	0.42	20.94*
RO x INS SS	0.25	0.00	-0.00	0.44

*p < .05

PSYCHOLOGICAL WELL-BEING

Psychological well-being was regressed onto the covariates of organisation and grading followed by the independent variable of role ambiguity, the moderator variable of emotional supervisor social support and the interaction term (role ambiguity x emotional supervisor social support). Two significant main effects were demonstrated. Role ambiguity was shown to have a main effect on the dependent variable ($F(1;259) = 55.17$, $p < .05$), accounting for 21% of the variance and emotional supervisor social support was shown to have a main effect on the dependent variable ($F(1;259) = 18.23$, $p < .05$), accounting for 8% of the variance. Results of the moderated multiple regression of psychological well-being on role ambiguity and supervisor social support are presented in Table 6.19.

TABLE 6.19 Moderated Multiple Regression for Psychological Well Being on Perceived Role Ambiguity and Emotional Supervisor Social Support.

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.01	0.01	-	1.39
Grading	0.06	0.05	-	8.58
Role Ambiguity	0.27	0.21	-0.63	55.17*
Emotional SS	0.35	0.08	-0.20	18.23*
RA x EMO SS	0.35	0.00	0.00	2.57

*p < .05

Psychological well-being was regressed onto the covariates of organisation and grading followed by the independent variable of role ambiguity, the moderator variable of appraisal supervisor social support and the interaction term (role ambiguity x appraisal supervisor social support). Two significant findings emerged. Role ambiguity was shown to have a main effect on the dependent variable ($F(1;266) = 53.63$, $p < .05$), accounting for 21% of the variance and appraisal support was shown to have a main effect on the dependent variable ($F(1;263) = 7.20$, $p < .05$) accounting for 4% of the variance. Results of the moderated multiple regression of psychological well-being on role ambiguity and appraisal supervisor social support are presented in Table 6.20.

TABLE 6.20 Moderated Multiple Regression for Psychological Well Being on Perceived Role Ambiguity and Appraisal Supervisor Social Support.

Variable Entered Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.01	0.01	-	1.31
Grading	0.06	0.05	-	2.80
Role Ambiguity	0.27	0.21	0.56	53.63*
Appraisal SS	0.31	0.04	-0.60	7.20*
RA x APP SS	0.31	0.00	0.01	0.26

*$p < .05$

Psychological well-being was regressed onto the covariates of organisation and grading followed by the independent variable of role conflict, the moderator variable of emotional supervisor social support and the interaction term (role conflict x emotional supervisor social support). Two significant findings emerged. Role conflict was shown to have a significant main effect on psychological well being ($F(1;259) = 26.76$, $p < .05$), accounting for 13% of the variance. Emotional supervisor social support was also shown to have a main effect on the dependent variable ($F(1;259) = 22.43$, $p < .05$), accounting for 12% of the variance. Results of the moderated multiple regression of psychological well-being on role conflict and supervisor social support are presented in Table 6.21.

TABLE 6.21 Moderated Multiple Regression for Psychological Well Being on Perceived Role Conflict and Emotional Supervisor Social Support.

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.01	0.01	-	1.89
Grading	0.06	0.05	-	3.33
Role Conflict	0.19	0.13	0.34	26.76*
Emotional SS	0.31	0.12	-0.19	22.43*
RC x EMO SS	0.31	0.00	-0.00	1.73

*p < .05

Psychological well-being was regressed onto the covariates of organisation and grading followed by the independent variable of role conflict, the moderator variable of appraisal supervisor social support and the interaction term (role conflict x appraisal supervisor social support). Two significant finding emerged, namely, role conflict was found to have a significant main effect on the dependent variable (F (1;266) = 26.25, p < .05), accounting for 13% of the variance and appraisal support was found to have a main effect on the dependent variable (F (1;266) = 9.19, p < .05) accounting for 8% of the variance. Results of the moderated multiple regression of psychological well-being on role conflict and appraisal supervisor social support are presented in Table 6.22.

TABLE 6.22 Moderated Multiple Regression for Psychological Well Being on Perceived Role Conflict and Appraisal Supervisor Social Support.

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.01	0.01	-	1.48
Grading	0.06	0.05	-	3.20
Role Conflict	0.19	0.13	0.19	26.25*
Appraisal SS	0.27	0.08	-0.75	9.19*
RC x APP SS	0.27	0.00	0.01	0.03

*p < .05

Psychological well-being was then regressed onto the covariates of organisation and grading followed by role overload, emotional supervisor social support and the interaction term (role overload x emotional supervisor social support). Two significant main effects were observed. Role overload was shown to have a main effect on the dependent variable (F (1;261) = 4.45, p < .05), accounting for 4% of the variance and emotional supervisor social support was shown

to have a main effect on the dependent variable (F (1;261) = 39.42, p < .05), accounting for 21% of the variance. Results of the moderated multiple regression of psychological well-being on role overload and emotional supervisor social support are presented in Table 6.23.

TABLE 6.23 Moderated Multiple Regression for Psychological Well Being on Perceived Role Overload and Emotional Supervisor Social Support.

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.01	0.01	-	1.40
Grading	0.06	0.05	-	3.20
Role Overload	0.10	0.04	0.01	4.45*
Emotional SS	0.31	0.21	-0.41	39.42*
RO x EMO SS	0.31	0.00	0.00	0.43

*p < .05

Psychological well-being was regressed onto the covariates of organisation and grading followed by role overload, instrumental supervisor social support and the interaction term (role overload x instrumental supervisor social support). Two significant main effects were observed. Role overload was shown to have a main effect on the dependent variable (F (1;264) = 2.42, p < .05), accounting for 4% of the variance and instrumental supervisor social support was shown to have a main effect on the dependent variable (F (1;264) = 1.27, p < .05), accounting for 3% of the variance. Results of the moderated multiple regression of psychological well-being on role overload and instrumental supervisor social support are presented in Table 6.24.

TABLE 6.24 Moderated Multiple Regression for Psychological Well Being on Perceived Role Overload and Instrumental Supervisor Social Support.

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.01	0.01	-	1.53
Grading	0.06	0.05	-	2.29
Role Overload	0.10	0.04	-0.09	2.42*
Instrumental SS	0.13	0.03	-0.86	1.27*
RO x INS SS	0.13	0.00	0.01	0.05

*p < .05

SELF-ESTEEM

Self-esteem was regressed onto the covariates of organisation, branch, grading and marital status followed by the independent variable of role ambiguity, the moderator variable of emotional supervisor social support and the interaction term (role ambiguity x emotional supervisor social support). Two significant findings were observed. Role ambiguity was shown to have a significant main effect on self-esteem ($F(1;253) = 99.65$, $p < .05$), accounting for 25% of the variance. Emotional supervisor support also had a significant main effect on self-esteem ($F(1;253) = 74.73$, $p < .05$), accounting for 18% of the variance. The results for the MMR of self-esteem on role ambiguity and emotional supervisor social support are presented in Table 6.25.

TABLE 6.25 Moderated Multiple Regression for Self-Esteem on Perceived Role Ambiguity and Emotional Supervisor Social Support.

Variable Entered	R^2	R^2 Change	b	F
Covariates				
Organisation	0.02	0.02	-	2.91
Branch	0.05	0.03	-	5.92
Grading	0.10	0.05	-	5.50
Marital Status	0.12	0.02	-	1.31
Role Ambiguity	0.37	0.25	-0.24	99.65*
Emotional SS	0.55	0.18	0.34	74.73*
RA x EMO SS	0.55	0.00	-0.00	0.00

*$p < .05$

Self-esteem was regressed onto the same covariates as outlined above followed by the independent variable of role conflict, the moderator variable of emotional supervisor social support and the interaction term (role conflict x emotional supervisor social support). Two significant findings were observed. Role conflict was shown to have a significant main effect on self-esteem ($F(1;253) = 18.43$, $p < .05$), accounting for 7% of the variance. Emotional supervisor support also had a significant main effect on self-esteem ($F(1;253) = 110.69$, $p < .05$), accounting for 32% of the variance. The results for the MMR of self-esteem on role conflict and emotional supervisor social support are presented in Table 6.26.

TABLE 6.26 Moderated Multiple Regression for Self-Esteem on Perceived Role Conflict and Emotional Supervisor Social Support

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.02	0.02	--	2.30
Branch	0.05	0.03	--	5.23
Grading	0.10	0.05	--	5.28
Marital Status	0.12	0.02	--	1.11
Role Conflict	0.19	0.07	0.36	18.43*
Emotional SS	0.51	0.32	0.49	110.69*
RC x EMO SS	0.51	0.00	-0.01	1.34

*p < .05

Self-esteem was regressed onto the covariate of organisation, branch, grading and marital status followed by the independent variable of role ambiguity, the moderator variable of appraisal supervisor social support and the interaction term (role ambiguity x appraisal supervisor social support). Two significant findings were observed. Role ambiguity was shown to have a significant main effect on self-esteem ($F(1;260) = 94.66$, $p < .05$), accounting for 25% of the variance. Appraisal supervisor support also had a significant main effect on self-esteem ($F(1;260) = 42.97$, $p < .05$), accounting for 12% of the variance. The results for the MMR of self-esteem on role ambiguity and appraisal supervisor social support are presented in Table 6.27.

TABLE 6.27 Moderated Multiple Regression for Self-Esteem on Perceived Role Ambiguity and Appraisal Supervisor Social Support

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.02	0.02	--	2.83
Branch	0.05	0.03	--	5.12
Grading	0.10	0.05	--	3.62
Marital Status	0.12	0.02	--	1.10
Role Ambiguity	0.37	0.25	-0.61	94.86*
Appraisal SS	0.49	0.12	0.71	42.97*
RA x APP SS	0.49	0.00	-0.00	2.98

*p < .05

Self-esteem was regressed onto the same covariates as outlined above followed by the independent variable of role conflict, the moderator variable of appraisal supervisor social support and the interaction term (role conflict x appraisal supervisor social support). Two

significant findings were observed. Role conflict was shown to have significant main effect on self-esteem (F (1;260) = 19.06, p < .05), accounting for 7% of the variance. Appraisal supervisor support also had a significant main effect on self-esteem (F (1;260) = 50.28, p < .05), accounting for 22% of the variance. The results for the MMR of self-esteem on role conflict and appraisal supervisor social support are presented in Table 6.28.

TABLE 6.28 Moderated Multiple Regression for Self-Esteem on Perceived Role Conflict and Appraisal Supervisor Social Support

Variable Entering Equation	R^2	R^2 Change	Beta	F
Covariates				
Organisation	0.02	0.02	--	2.61
Branch	0.05	0.03	--	3.96
Grading	0.10	0.05	--	2.99
Marital Status	0.12	0.02	--	0.81
Role Conflict	0.19	0.07	-0.01	19.06*
Appraisal SS	0.41	0.22	1.07	50.28*
RC x APP SS	0.41	0.00	-0.01	0.09

*p < .05

SUMMARY OF RESULTS

The previous section presented the results of phase two of the present study. Statistical analyses were conducted once the assumptions underlying the statistical technique of moderated multiple regression were fulfilled.

These analyses revealed that:

(1) role ambiguity and role conflict had a main effect on the dependent variables of hob satisfaction, psychological well-being, propensity to leave and self-esteem. In addition, role overload had a main effect on job satisfaction and psychological well-being;

(2) emotional supervisor social support had a main effect on the dependent variables of job satisfaction, self-esteem, psychological well-being and propensity to leave;

(3) informational supervisor social support had a main effect on job satisfaction and propensity to leave;

(4) instrumental support had a main effect on job satisfaction, psychological well-being and propensity to leave and;

(5) appraisal supervisor support had a main effect on self esteem and psychological well-being.

However, no main effect of role overload on propensity to leave was reported. In addition, no moderating effects were reported for any of the hypothesised stress-strain relationships. Both the statistically significant results as well as all non-significant findings will be discussed in the following section. Thereafter, theoretical and practical implications and the limitations of the present research will be discussed.

DISCUSSION

The aim of the second phase of the present research was to investigate whether the stress-outcome relationship depends on the type of support received. It was proposed that different types of support would have more beneficial effects in specific stress-outcome relationships only. Two effects of social support were assessed, namely, the *main* or *direct* effect of support on stress and strain, and the *moderating* effect of support in the relationship between stress and strain. In addition, the direct effect of stress upon strain was assessed. Three hypotheses were proposed, within which these two effects were assessed.

The first hypothesis proposed that emotional and appraisal supervisor social support would have a main effect on the strains of self-esteem and psychological well-being. In addition, it was proposed that these two types of support would moderate the relationship between role conflict and role ambiguity and self-esteem and psychological well-being. The direct effect of conflict and ambiguity on these two dependent variables was also proposed.

The second hypothesis proposed that informational and emotional support would have a main effect on the strains of job satisfaction and propensity to leave. The moderating effect of informational and emotional social support in the relationship between role conflict, role ambiguity and job satisfaction and propensity to leave was also proposed along with the direct effect of these role stressors on job satisfaction and propensity to leave.

The third hypothesis proposed that instrumental and emotional support would have a main effect on the strains of psychological well-being, job satisfaction and propensity to leave. In addition, the moderating role of instrumental and emotional support in the relationship between work overload and these strains was also proposed. Furthermore, a direct effect of work overload on the dependent variables was hypothesised.

With regard to the results of the testing of all three hypotheses only main effects were demonstrated. More specifically, all the proposed types of supervisor social support had significant main effects on the dependent variables and all the stressor variables had a direct effect on the dependent variables. There was, however, one exception. No main effect of role overload on propensity to leave was demonstrated.

In addition, no moderating effects of the four types of supervisor social support were demonstrated in any of the twenty-two relationships between the selected stressors and strains outlined in the hypotheses. These findings will be discussed in the following section, beginning with the statistically significant main effects.

STATISTICALLY SIGNIFICANT MAIN EFFECTS

THE MAIN EFFECTS OF THE STRESSOR VARIABLES

The results of the present study showed that all three stressor variables indicated a direct effect on the dependent variables of self-esteem, psychological well-being, propensity to leave one's job and job satisfaction. Below, follows a discussion of the effect of each of these stressor variables upon the dependent variables. The relationship of the present study's findings to past research is also included.

ROLE AMBIGUITY

As can be seen from the Tables of MMR results, role ambiguity indicated a significant main effect on all of the dependent variables. These were, first, a main effect on psychological well-being where role ambiguity accounted for 21% of the variance in the dependent variable. Second, role ambiguity had a main effect on self-esteem, accounting for 25% of the variance in the latter variable. Third, role ambiguity had a main effect on job satisfaction, accounting for 21% of the variance in this dependent variable, and fourth, role ambiguity had a main effect on propensity to leave. With regard to propensity to leave, 19% of the variance was accounted for by role ambiguity.

These findings were all found to occur in the expected directions. That is, role ambiguity had a negative association with psychological well-being, self-esteem, job satisfaction and propensity to leave. With regard to propensity to leave, it will be remembered that the scale assesses the intention of a subject to *stay* employed. Thus, a negative relationship is expected.

ROLE CONFLICT

Role Conflict was also shown to have a significant main effect on all the dependent variables in the present research. With regard to psychological well-being and self-esteem, role conflict had a main effect accounting for 13% and 7% of the variance in these two dependent variables respectively. In addition, role conflict had a main effect on job satisfaction and propensity to leave where 10% and 9% of the variance was, respectively, accounted for (See Tables of MMR results). These relationships all occurred in the expected negative direction.

ROLE OVERLOAD

Role overload indicated a significant main effect on two dependent variables, namely, psychological well-being and job satisfaction. In the first instance, role overload explained 4% of the variance in the dependent variable. In the second instance role overload explained 1% of the variance in the dependent variable (See Tables of MMR results). Both these relationships were found to occur in the expected negative direction.

These findings are highly consistent with previous research on the relationship between role stress and the above described dependent/outcome variables. An examination of the literature compiled over the last three decades has revealed that, as found in the present research, role ambiguity, role conflict and role overload are related to both individual and organisational outcomes of job satisfaction, propensity to leave, self-esteem and psychological well-being, (Beehr, 1976; Beehr, King and King, 1990; Cooper and Payne, 1988; Frone, 1990; Jackson and Schuler, 1985; Rizzo, House and Lirtzman, 1970, Schaubroeck, Cotton and Jennings, 1989; Sawyer, 1992; Spector, Dwyer and Jex, 1988).

In addition, the direction of effects demonstrated in these studies are consistent with those demonstrated in the present study. For example, previous researchers have demonstrated a direct negative relationship between role conflict, role overload and role ambiguity and job satisfaction, propensity to stay, self-esteem and psychological well-being, and direct positive relationship between these stressors and depression and tension (Bedeian and Armenakis, 1981; Ganster, Fusilier and Mayes, 1986; Kaufmann and Beehr, 1989; Kemery, Bedeian, Mossholder and Touliatos, 1985; La Rocco and Jones, 1978; Schaubroeck, Cotton and Jennings, 1989; Seers, McGee, Serey and Graen, 1983). Meta-analyses, employed by a number of previous researchers in order to summarise this vast amount of research, of which the above studies represent only a few examples, have also convincingly shown that role stressors are reliably related to all of the consequent conditions examined in the present study (Fisher and Gitelson, 1983; Jackson and Schuler, 1985).

Furthermore, these meta-analyses have indicated that there is significant *between-study variability* with regard to the impact of role stress on outcome variables, proposing that this variability may be attributable to the influence of *moderator variables* (Jackson and Schuler, 1985).

A particular moderator of note in this body of research literature is that of supervisor social support. A number of researchers have proposed that supervisor social support may be an extremely important moderator of work-site stress and strain as supervisors are highly influential members of an employee's role set (Beehr, King and King, 1990). Some researchers have gone so far as to state that the *main function* of supervisor social support may, in fact, be in structuring the work role itself. For example, supportive supervisors, by allocating tasks to their subordinates that these individuals are capable of handling well, can prevent the experience of role overload. In addition, supportive supervisors can prevent role ambiguity by giving clear and unambiguous directions (Ganster *et al.*, 1986; Marcelissen *et al.*, 1988; Winnubst *et al.*, 1988).

These proposals, made by individual researchers and suggested by the meta-analyses, have special relevance for the findings obtained in the present study, with particular reference to the effects of supervisor social support in relationship to specific outcome variables. Results obtained in the present study, revealed that supervisor social support does indeed have a positive effect on consequences of role stress such as job satisfaction, propensity to leave, self-esteem and psychological well-being. More specifically, findings observed suggest that *specific types* of social support can have a positive impact on subordinates with regard to these outcome variables.

The following section is devoted to outlining the effects of these specific support types on the selected outcome/dependent variables (when entered via the selected variables of role stress: ambiguity, conflict and overload). Once again findings will be discussed in terms of their consistency with previous research on social support, stress and strain.

THE MAIN EFFECT OF THE FOUR DIMENSIONS OF SUPERVISOR SOCIAL SUPPORT

EMOTIONAL SUPERVISOR SOCIAL SUPPORT

Results indicated that emotional supervisor social support had a widespread main effect upon all the dependent variables. That is, for all three of the role stressors, emotional support contributed independently to the prediction of job satisfaction, propensity to leave, self-esteem, and psychological well-being. (See Tables of MMR results).

For role ambiguity, role conflict and role overload, emotional support contributed independently to 20%, 18%, and 37% of the variance in job satisfaction respectively. For the same three role stressors, emotional support contributed independently to 8%, 12%, and 21% of the variance in psychological well-being respectively. With regard to emotional support's contribution to the variance of propensity to leave, when entered with the three role stressors of ambiguity, conflict and overload, percentage of variance contributed was 22%, 29%, and 38%. For role ambiguity and role conflict, emotional support contributed independently to 18% and 32% of the variance in self-esteem, respectively.

Such findings are consistent with the literature on emotional social support job satisfaction, general psychological health, propensity to leave and self-esteem.

Numerous researchers have indicated that social support can ameliorate, that is, have a main effect on health, independent of level of adversity or stress experienced (eg. Andrews, Tennant, Hewson and Vaillant, 1978; Aneshensel and Frerichs, 1982; Lin, Simeone, Ensel and Kuo, 1979; Tholts, 1983b; Turner, Williams, Ware and Donald, 1981; Turner, 1982). In fact, Tholts (1982a; 1983c) notes that the main effect of social support on strain may occur due to *lack* of support or a deterioration in support over time, which are stressors in themselves.

According to Ganster and Victor (1988), social support, particularly from work-sources such as the supervisor, demonstrates a very consistent main effect throughout the occupational stress literature. They note that social support generally accounts for about 5 to 10 percent of the variance in mental health variables such as anxiety, depression and somatic complaints. For more job related outcomes such as job satisfaction, turnover and work adjustment, the effect sizes are even larger. Thus, the findings in the present study with regard to main effects and effect size are consistent with the occupational stress-social support literature.

EMOTIONAL SOCIAL SUPPORT AND JOB SATISFACTION

With regard to the present study's observation of a main effect of emotional social support on job satisfaction; a number of previous studies have demonstrated the same effect. For example, Beehr, King and King (1990) and Seers *et al.* (1983) reported a main effect of emotional supervisor social support on job satisfaction independent of the experience of role conflict and ambiguity. Melamed and Kushnir (1991) also report a main effect of work sources of social support on job satisfaction, independent of the experience of overload and ambiguity.

EMOTIONAL SOCIAL SUPPORT AND PROPENSITY TO LEAVE

With regard to the positive main effect of emotional support on propensity to leave, observed in the present study, a number of authors have suggested that propensity to leave and job turnover can be reduced by social support (Himle, Jayartayne and Thyness, 1989; House, 1981).

For example, in studies carried out by Schaubroeck *et al.* (1989) and La Rocco and Jones (1978) this main effect of emotional support on propensity to leave was observed. That is, Schaubroeck *et al.*, (1989) reported a positive direct effect of social support on propensity to stay, and La Rocco and Jones (1978) reported a positive main effect of leader support on potential to re-enlist, in a sample of Navy personnel. It thus appears that the present study's findings with regard to a main effect of emotional support upon propensity to leave, is consistent with previous research.

As mentioned previously, because the Propensity to Leave Scale (Lyons, 1972) actually measures propensity to *stay*, the relationship between support and propensity to leave in the present study was positive. In both the Schaubroeck *et al.* (1989) study and the La Rocco *et al.* (1978) study the direction of the relationship was found to be the same.

However, Schaubroeck *et al.*, (1989) and Frone (1992) suggest that the impact of social support on propensity to leave may occur *indirectly* through the relationship of job satisfaction to propensity to leave (See Figure 6.2). Thus, to the extent that social support increases job satisfaction, such support may indirectly lead to an increase in potential to stay in the employing organisation.



FIGURE 6.2 The Relationship of Support, Job Satisfaction and Propensity to Leave

EMOTIONAL SOCIAL SUPPORT AND SELF-ESTEEM:

The main effect of emotional support on self-esteem is also consistent with the previous research literature. For example, Muhlenkamp *et al.* (1986), in their research on the relationship between self-esteem, emotional social support and positive health practices, demonstrated this positive impact of support upon feelings of self-esteem. Hobfoll, Nadler and Lieberman (1986) also demonstrated that having intimate relationships, building and

maintaining social networks and deriving satisfaction from these relationships, are all related to self-esteem, independent of any stress reduction effect.

This effect of emotional support on self-esteem occurs as social support is believed to communicate to a recipient that he/she is valued for his/her own worth and is accepted despite any difficulties or personal faults (Cohen and Wills, 1985). Thus, the extent to which emotional support conveys positive evaluations (eg. love, caring, esteem, value, prestige and attributed competence) to a recipient, will reflect on an individual's self-esteem (Tholts, 1985).

Muhlenkamp and Sayles (1986), in fact note that common to *all* definitions of emotional social support is the recognition of the impact of such support on feelings of self-esteem. Indeed, the eminent personality theorist, Harry Stack Sullivan (1953) defined the self as the reflected appraisals of significant others. Therefore, the findings in the present research are consistent, not only with previous research, but also with conceptualisations of support and self-esteem.

EMOTIONAL SOCIAL SUPPORT AND PSYCHOLOGICAL WELL-BEING:

With regard to the main effect of emotional social support on psychological well-being, this particular finding was also consistent with previous research. Other studies demonstrating a direct effect of emotional support on psychological well being are those carried out by Beehr, King and King (1990), Ganster *et al.*, (1986), Jayartayne and Chess (1984), Ladewig, McGee and Newell (1990), McIntosh (1991) and Turner (1982).

Beehr, King and King (1990), demonstrated that emotional support had a main effect on depression and emotional exhaustion, both of which are aspects of poor psychological well-being. Ganster, Fusilier and Mayes (1986) who examined the effect of both supervisor *and* coworker support on stress and strain, also reported a main effect of both sources of social support on depression. Ladewig, McGee and Newell (1990), although examining non-work sources of support, also noted that emotional support had a main effect on depression. McIntosh (1991), in turn, reported a main effect of social support on emotional exhaustion. Moreover, Jayartayne and Chess (1984) reported a main effect of supervisor social support on three indices of psychological strain, namely, anxiety, irritability and depression. These effects occurred independent of the experience of role conflict and ambiguity. Turner (1982) too, found that there were clear main effects in the social support-psychological well-being relationship and he noted that some important part of this association *must* be direct, rather than conditional.

In all of the above studies, including the present study, the relationships between support and

strain were in the expected negative direction. That is, the higher the support, the lower the negative effect on psychological well-being.

On a conceptual level, the finding of a main effect of emotional support on psychological well-being, is also consistent with the research literature, with special reference to the relationship between psychological well-being and self-esteem (see Chapter 3). Numerous researchers have noted that self-esteem and psychological well-being are intimately linked to one another (eg. Kaplan, 1980; Tholts, 1985). They propose that reflected positive self-evaluations generate satisfaction, contentment and other positively-toned affective states, while reflected negative self-evaluations are a primary source of anxiety and depression and possibly, guilt or shame (Shott, 1979; Tholts, 1985).

Thus, to the extent that social support may have a positive direct effect on self-esteem, it is expected that support will, by its positive main effect on self-esteem, have a positive effect on psychological well-being (see Figure 6.3). Tholts (1985), in fact, notes that social relationships which operate through mechanisms clearly recognisable as dimensions of emotional support, do have a definite positive direct effect on self-esteem and psychological well-being.



FIGURE 6.3 The Relationship between Support, Self-Esteem and Psychological Well-being

SUMMARY/CONCLUSION

From the above discussion, it thus becomes apparent that the findings observed in the present study were consistent with the research literature on emotional social support and indices of individual and organisational strain. Although direct effects of social support on psychological well-being and propensity to leave were demonstrated, there is a possibility that these relationships are affected by the extent of an individual's self-esteem and the degree to which they are satisfied with their jobs. Greater clarification is required on this issue. However, such clarification falls beyond the scope of the present study. A possible future recommendation is that researchers use alternative statistical techniques such a Path Analysis which will enable a determination of the extent to which psychological well-being is causally affected by self-esteem and the extent to which propensity to leave is causally affected by job satisfaction.

INFORMATIONAL SUPERVISOR SOCIAL SUPPORT

Results showed that informational support had a main effect on job satisfaction and propensity to leave. That is, for two of the role stressors (ambiguity and conflict), informational support

contributed independently to variance in job satisfaction and propensity to leave (See Tables of MMR results).

Once again, these findings were in keeping with the research on role stress, social support and job satisfaction and propensity to leave, support for these findings being derived from studies which have examined variables that are *conceptually linked* to or *intercorrelated* with informational support.

For example, the research on Intolerance of Ambiguity (IOA) which suggests a degree of intercorrelation between the concept of IOA and informational support (Frone, 1990). Within this research, Intolerance of Ambiguity (IOA) has been defined as the tendency to perceive ambiguous situations as sources of threat (Frone, 1990). A substantial body of research has demonstrated that the role stress-strain relationship is stronger amongst high IOA employees as opposed to low IOA employees and that IOA can moderate the relationship between role ambiguity and conflict and outcomes of turnover intentions and job satisfaction. That is, the extent to which an individual is high or low on IOA can determine the impact that role stress will have in terms of strain (Benson, Kemery, Sauser and Tankesley, 1985; Frone, 1990; Ivancevich and Donnely, 1974; Lyons and Ivancevich, 1978).

If one extrapolates from the literature on the effects of Intolerance of Ambiguity (IOA) with regard to role stress and outcome variables, there appears to be a degree of conceptual intercorrelation between IOA and informational support. This may be due to the possibility that informational support may be able to *alleviate* the experience of IOA. This may occur because informational support is designed to increase role clarity and reduce role ambiguity and conflict.

It is thus possible that this type of support would *reduce* IOA and therefore reduce any negative impact of role stress on job satisfaction and intention to leave one's job.
Frone (1990), in fact, noted that there may well be moderator variables (for example informational supervisor social support) that can *condition* the experience of IOA. If this is in fact so, it seems likely that informational support would have the same effect on these outcome variables in the event of the experience of role stress. That is, the extent to which an individual perceives him/herself to be receiving a high or low degree of informational support, will determine the impact that role stress will have on the individual in terms of strain.

These IOA findings thus suggest that informational support may work to reduce the impact of stress on strain by its ability to reduce the experience of IOA. Although, the present study did not assess IOA and thus did not determine whether the impact of informational support

occurred via its effect on IOA, the findings of a main effect of this type of support on satisfaction and propensity to leave are nevertheless in keeping with the IOA literature.

Further evidence supporting the finding of a main effect of informational support upon job satisfaction and propensity to leave is derived from a study carried out by Tetrick and La Rocco (1987). In this study it was demonstrated that understanding, prediction and control of job conditions had a direct positive effect on job satisfaction. The way in which Tetrick *et al.* (1987) defined understanding, prediction and control appears to be conceptually linked to the definition of informational support which was utilised in the present study. Within the present study, informational support is defined/conceptualised as being that type of support that provides the individual with greater *understanding* of a stressor situation, assisting the individual in better defining the environmental problem, countering lack of *control* and thus enhancing *predictability* (House, 1981; Cohen and Wills, 1985). It thus appears that there may be a conceptual link between this definition of informational support and Tetrick *et al.*'s definition of understanding, prediction and control.

Therefore, the findings of the present study's main effect of informational support on job satisfaction can be regarded as consistent with findings obtained in the Tetrick and La Rocco (1987) study.

Furthermore, as a negative relationship has been reported between job satisfaction and propensity to leave (Steers and Porter, 1983; Schaubroeck *et al.*, 1989), the findings of a main effect of informational support upon propensity to leave can also be seen to be consistent with previous research (see Figure 6.4).

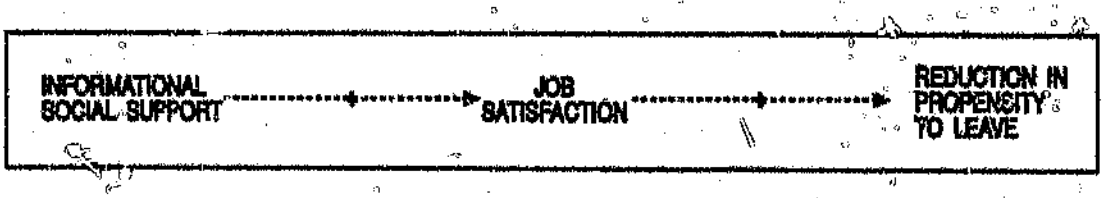

FIGURE 6.4 **The Relationships between Informational Support, Job Satisfaction and Propensity to Leave**

INSTRUMENTAL SUPERVISOR SOCIAL SUPPORT

Results demonstrated that instrumental supervisor social support had a main effect on the dependent variables of psychological well-being, job satisfaction and propensity to leave. This particular type of support contributed independently to the variance in each of the above mentioned dependent variables for the role stressor of work overload (see Tables of MMR results).

Once again, the findings of the present study, with regard to the main effect of instrumental support upon the outcome variables, were consistent with previous research. For example, Kaufmann and Beehr (1989) demonstrated a main effect of instrumental social support from two sources, namely co-workers and supervisors, upon job satisfaction, boredom and depression. Similarly, Beehr, King and King (1990), demonstrated that instrumental support could have a main effect on job satisfaction, depression and emotional exhaustion, independent of the experience of role stress. In addition, Himle, Jayaratyne and Chess (1989) note that instrumental support from supervisors can reduce psychological strains of depression, irritation and somatic complaints along with organisational strains of job dissatisfaction and intention to leave one's job.

APPRAISAL SUPERVISOR SOCIAL SUPPORT

For two of the role stressors (ambiguity and conflict), appraisal support contributed independently to the prediction of self-esteem and psychological well-being (See Tables of MMR results).

This finding was also consistent with the literature on self-esteem, psychological well-being and appraisal support. As mentioned previously, the self was defined as reflected appraisals by significant others (Sullivan, 1953). To the extent that appraisal support provides a recipient with information relevant to self-evaluation and social comparison, it was expected that a main effect of such support on self-esteem and psychological well-being would be apparent (House, 1981).

It must, however, be noted that the information provided needs to "positive". According to Tholts (1985), evaluations of one's overall worth, importance and competence depend, to a large part, upon the perceived appraisals of significant others with whom one regularly interacts. If such appraisals are negative they will be reflected in negative self-evaluations/poor self-esteem and the latter's consequent negative effects of anxiety, depression, shame and/or guilt (Tholts, 1985).

THE MAIN EFFECTS: CONCLUSION AND SUMMARY

The previous section entailed a discussion of the significant main effects of (1) the role stressors of conflict, ambiguity and overload upon the dependent variables, and (2) the different types of social support on specifically identified dependent variables. All of the main effects were discussed in the light of their consistency with previous findings in the social support-occupational stress literature. One issue, however, requires further discussion and that is the finding of a widespread effect of emotional support upon all of the dependent

variables. The following section is devoted to a discussion of this issue. Thereafter, non-significant findings will be discussed.

THE WIDESPREAD MAIN EFFECT OF EMOTIONAL SUPERVISOR SOCIAL SUPPORT

In the present study results revealed a widespread effect of social support across all the dependent variables. This demonstration of a widespread, swamping effect of emotional support, occurring in conjunction with effects of specific types of support, is consistent with the findings demonstrated in a number of previous studies.

An example is the study carried out by Barling, MacEwan and Pratt (1988). In this study a vignette technique was used, with results revealing that 1) subjects *could* differentiate between different types of support, and (2) that these different types of support were perceived to have a differential impact with regard to certain outcomes of specifically experienced stressors.

However, results also revealed that although distinctions could be made between the different types of support, all of the other types of support, that is the instrumental, informational and appraisal support types, were perceived of as being, to a certain extent, emotional in nature. Thus when subjects indicated that the individual in the vignette appeared to be receiving informational support they also felt that the individual was receiving emotional support. Similarly, if they identified the individual to be receiving either instrumental or appraisal support, they also perceived the individual to be receiving emotional support. With regard to outcomes, only certain types of support were perceived to be beneficial when accompanying the experience of a specific stressor. However, in all instances the beneficial effect of a particular type of support occurred in conjunction with the beneficial effect of emotional support.

These results thus seem to indicate that other types of support are all perceived of as containing a socio-emotional element and that in terms of beneficial outcomes, it is the *combination* of one of these other types along with emotional support that predicts the most positive outcomes in specific stress-strain situations.

Such findings were consistent with those obtained in the present study. In the first phase of the present study, in which a multi-dimensional measure of support was developed, it was demonstrated that subjects *could* distinguish between the different types of support (See Chapter 5). However, findings also revealed that emotional support was the dominant type of support and that all the other types of support included in the measure were perceived by subjects to be underpinned to some extent, by a socio-emotional element.

With regard to specificity of effect of different types of support on different outcomes, as with the Barling *et al.* (1988) study, the present study also demonstrated that certain types did have specific effects on certain outcomes, in conjunction with an effect of emotional support upon all outcome variables.

In a study carried out by Vaux, Riedel and Stewart (1987), additional support was obtained for the present studies finding of a widespread effect of emotional support on all outcome variables, (in conjunction with effects of specific types of support in specific outcomes). In this study, as with the Barling *et al.* (1988) study, a vignette technique was used. Participants were required to read vignettes which gave a general description of a same-sex individual with either adequate support or support that was deficient in one of a five modes described by Vaux *et al.* (1987) in their Social Support Behaviours Scale (SS-B). These five modes were emotional support, socialising, practical and financial assistance and advice/guidance. Of these five, emotional support appears to be conceptually similar to the definition of emotional support used in the present study, while practical assistance and advice/guidance can be likened to the definition of instrumental and informational support used in the present study.

Participants were then asked to complete the scale in the way that they thought the described individual would, drawing on their personal and vicarious experience (Vaux *et al.*, 1987). Results revealed that, in vignettes where subjects were shown to be deficient in emotional support, lower scores across all modes of support were reported by participants. In addition, emotional support deficits (along with the type of support deficiency expected), tended to be reported for all other problems.

Thus, these findings also provide support for those obtained in the present study which revealed that emotional support *does* constitute a widespread form of support across a variety of problems, alongside other types of support which are specific to certain types of problems only.

Tentative suggestions on the nature of support dimensionality can be proposed on the basis of the findings of both the present research and the Barling *et al.* (1988) and Vaux *et al.* (1987) study.

It can be proposed that emotional support may be manifest in many other forms of social support and may, to some extent, be the most important form of social support. Nevertheless, one can still argue that in spite of this, modes of support *should* vary across types of problem, reflecting the degree to which these modes of support might help resolve the problem or help

alleviate the distress related to it (Vaux *et al.*, 1987). That is, in *specific* instances, the other types, with functions that are better able to facilitate specific strategies of coping and problem solving, may be, *additionally*, more appropriate.

According to Himle, Jayartayne and Thyness (1988) these different types of social support, more especially informational and instrumental support, both of which are designed to improve performance and problem-solving activities, may occur in what they refer to as a "climate of emotional support". The implication is, thus, that the presence of emotional support creates a *necessary preconditional climate* within which other types of support may operate. These types may, by virtue of the possibility that they occur within a climate of general emotional support, work in *combination* with emotional support, *enhancing* the latter's effect and reducing negative effects of stress better than emotional support alone (Barling, MacEwan and Pratt, 1988; Himle, Jayartayne and Thyness, 1988; Schradle and Dougher, 1985).

This viewpoint, derived from previous research and literature on social support and the present study's findings, thus, offers a form of explanation as to why emotional support had a widespread effect across all the dependent variables selected for study in the present research while the other types had an effect in specific stress-strain situations only.

STATISTICALLY NON-SIGNIFICANT MODERATOR EFFECTS

In the present study a number of 'moderator hypotheses' were formulated. These hypotheses were empirically tested with the moderated Multiple Regression statistical technique. From a potential twenty-two moderating effects of supervisor social support, no significant findings emerged.

This lack of observation of moderating effects has been observed in a great amount of previous research on the moderating effects of social support. By and large, it appears in the research on social support and stress, that overall, there has been a lack of evidence supporting the moderating hypothesis of social support.

According to Haines, Hurlbert and Zimmer (1991), support for the this hypothesis is tenuous. Ganster and Victor (1988) note that even though the social support moderating hypothesis has been prevalent in the work stress literature almost since its inception (See Kahn, Wolfe, Quinn, Snoek and Rosenthal, 1964), evidence for the moderating effect is decidedly mixed, and more so than in the wider social support literature. There are as many, if not more, examples of researchers who *failed* to find moderating effects as there are of those who did find such effects (Ganster and Victor, 1988).

For example, Jayaratne and Chess (1984) reported main effects only in their study on the relationship between role conflict, role ambiguity, supervisor and co-worker emotional support and job satisfaction and psychological well-being. Ganster, Fusilier and Mayes (1986) also failed to find any significant interactions in the relationship between conflict, ambiguity, supervisor social support and job satisfaction and depression, observing main effects only in these relationships. In addition, Seers *et al.*, (1983) and Turner (1982) failed to find any significant interaction effects of social support in stress-strain relationships, reporting significant main effects only.

In some studies in which moderating effects were noted, these were not always consistent across different types of stressors, different outcome variables and different sources of support (See La Rocco and Jones, 1978; La Rocco, House and French, 1980, Ladewig *et al.*, 1991; etc.). In addition, the work stress literature contains several studies that have reported what appear to be *opposite moderating* effects (eg. Abdel-Halim, 1982, Beehr and Kaufmann, 1991). In these studies, social support was found to *exacerbate* the negative effects of stress on strain.

Thus, it appears that findings for the moderating hypothesis, in which social support attenuates the negative impact of stress on strain, have been somewhat elusive (Ganster and Victor, 1988; Haines *et al.*, 1991).

A number of possible explanations for the lack of significant observations with regard to this hypothesis have been outlined in the research literature. These pertain to the temporal dimension of social support, the effect of sociodemographic variables and personality/recipient characteristics on social support utilisation, and the effect of provider and relationship characteristics between provider-recipient on social support utilisation. A discussion of these possible explanations follows below.

THE TEMPORAL DIMENSION OF SOCIAL SUPPORT

One possible explanation for a lack of observation of significant interaction effects relates to the *temporal dimension* of social support. Numerous researchers have noted that social support has different patterns of temporal influence and that these temporal patterns may confound the observation of moderating effects of support in the relationship between stress and strain (Barling, 1990; House, 1981; Jacobson, 1986; O'Reilly, 1988; Schwarzer and Leppin, 1990; Tholts, 1982).

According to Schwarzer and Leppin (1990) and O'Reilly (1988), different types of support

operate over different time periods. They argue that emotional support may be an 'everyday' type of support that operates independent of the experience of stress. This type may be more stable over lengthy periods of time, which may account for its generalised main effect on indicators of health and well-being. Instrumental, Informational and Appraisal support, on the other hand, may be types that are evident or required at 'critical times' only, operating within shorter time periods, and in response to the experience of specific types of stress.

However, in certain instances, emotional support may also be regarded as a 'critical times' type of support. For example, if the stressor is a specific threat to an individual's feelings of being loved and cared for, the love and caring that emotional support implies may be the critical type necessary to attenuate the impact of this stressor on well-being. It is at these critical times when an individual experiences stress, which are evident over a shorter time period, that social support is expected to have a moderator effect (House, 1981; Sarason, Pierce and Sarason, 1990).

Within these instances of 'critical times' there are distinct phases of operation of social support that can be identified. In these instances, because social support is an external resource, the individual experiencing stress needs time to 1) **seek out** and **mobilise** social support resources and 2) **utilise** such support once it has been mobilised (Barling, 1990; House, 1981; Jacobson, 1986).

House (1981), however, notes that this does not mean that social support is not an *ongoing* resource but rather that social support is only (1) *mobilised* at a certain point in time, (2) *utilised* in the period thereafter and (3) finally its utility or lack thereof reaches a *stage of completion.* In the absence of a stressor or stressors the role of social support is no longer *manifest.* Rather it is an ongoing resource which operates *latently.* In such an instance social support's effect would be that described as a main effect (Jacobson, 1986). Thus, according to Jacobson (1986), these two effects are not unrelated. Instead they reflect a situation where social support resources exist, albeit latently, only becoming manifest when the individual recipient experiences stressors and prevails upon this latent social support system, mobilising in into active usage.

The quality of the latently existing system and the ability of the individual to utilise it appropriately will determine to what extant it is effective in moderating any negative impact of perceived stressors. Thus, Jacobson (1986), describes the dual nature of social support by proposing that it has a **potential** and **actual** dimension and that the former is transformed into the latter by the perception of a stressor or stressors.

Due to this time factor of support, if one wishes to demonstrate a moderating effect, subjects need to be observed at the *precise time* when the coping or re-interpretation involved in the moderating process takes place. If individuals are not assessed at *exactly* this time, that is if they are assessed when the moderating process is completed, all that will be observed is that subjects with high support would have better health than those with low support. In short, all that would be observed is a pure main effect (House, 1981) (See Figure 6.5). It is thus possible, in the present study, that, by and large, subjects were not observed at the time that moderating was taking place. If this was in fact so, it would explain why no moderating effects were observed and why only main effects were evident.

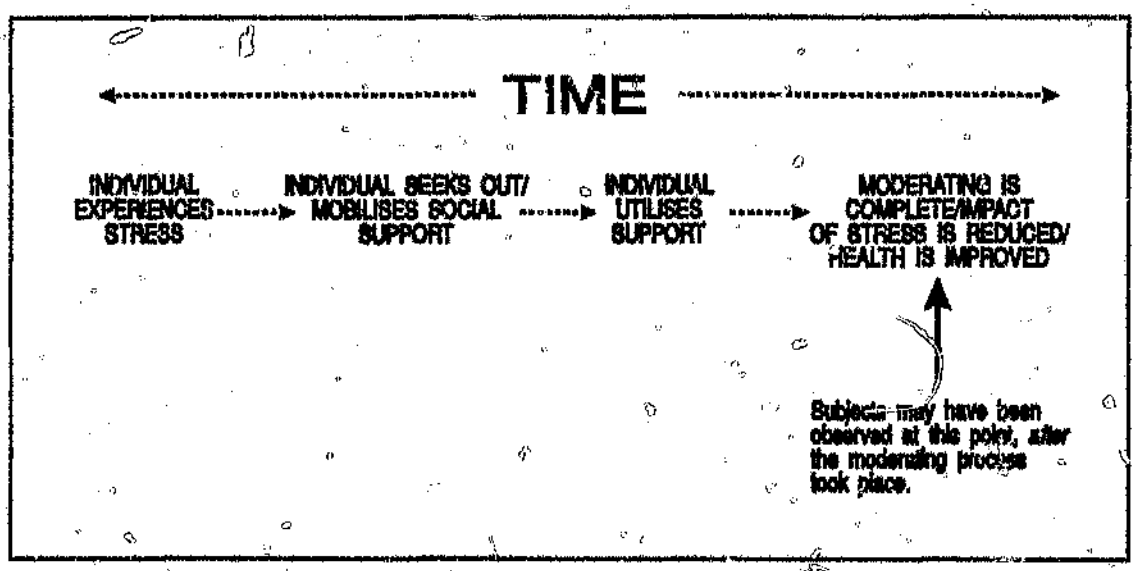

FIGURE 6.5 The Moderating Process

SOCIODEMOGRAPHIC VARIABLES, RECIPIENT AND PROVIDER CHARACTERISTICS, AND RELATIONSHIP FACTORS: THEIR CONTRIBUTION TO THE SOCIAL SUPPORT PROCESS

The occupational stress-social support literature indicates that the utilisation of social support may be dependent upon socio-demographic differences amongst individuals such as gender, race, social class and education. In addition, individual personality differences of social support recipients and characteristics of the support provider and relationship between the provider and the recipient, can also influence perceptions of and utilisation of social support

(Dunkel-Schetter and Skokan, 1990; Ganster and Victor, 1988).

In the present study recipient, provider and relationship characteristics were *not* assessed. These variables were considered to be beyond the scope of the present study, the main aim of which was to develop and validate a multidimensional measure of supervisor support. However, it is necessary to enter into a brief discussion of these variables as their possible impact upon the social support process cannot be ignored.

As socio-demographical variables *were* assessed, a more detailed discussion of their impact upon the social support process will be described. In addition, a number of *correlates* of these variables will be identified in terms of their influence on help-seeking behaviour.

SOCIO-DEMOGRAPHIC VARIABLES

Socio-demographic variables of gender, race, social class and education have been associated with differential exposure to structural barriers and opportunities in society which may, in turn, shape social relationship structures and processes (House, Umberson and Landis, 1988).

As mentioned previously, as part of the assumption testing of Moderated Multiple Regression, these socio-demographic variables needed to be assessed through the use of t-tests, one-way analyses of variance and pearson correlations, in order to determine whether they were contributing to the variance in the dependent variables. If their contribution to the variance was found to exist, these individual difference variables were included in the regression equations as covariates in order to partial out their effects.

However, such a technique, (MMR), does not enable one to determine to what extent these variables effect the way in which an individual would mobilise and utilise social support. It thus becomes a possibility that these variables may have influenced support utilisation in the present study, thereby accounting for the fact that no moderating effects were observed.

The influence that these particular individual differences can have on whether social support is utilised is noted by a large body of research evidence. A discussion of this research follows below.

GENDER AND SOCIAL SUPPORT UTILISATION

A number of researchers note that there are definite differences between the sexes with regard to the utilisation of social support. All suggest that women have a greater dependence upon social support as a coping resource as opposed to men (Defares, Brandes, Nass and Van der

Ploeg, 1985; Flaherty and Richman, 1989; Rosario, Shinn, Morch and Huckabee, 1988). Defares *et al.*, (1985) report that men resort more to cognitive active coping, suggesting an assertive outgoing attitude, while women rely to far greater extent on social support in seeking solutions to their problems. In addition, it is also noted that women provide much more support to others than do men (Flaherty and Richman, 1989: House, Umberson and Landis, 1988). According to Lowenthal and Haven (1968) wives are the primary confidant for husbands. Kessler, McLeod and Wethington (1985) reports that in surveys of help-seeking behaviour it is 30 to 50% more likely that women are mentioned as help providers as opposed to men. In addition, Vernoff, Douvan and Kulka (1981) note that women report providing friends and family with personal favours, emotional support and informal counselling about personal problems to a far greater extent than men. It is, thus, likely that women may become *severely burdened* by demands made upon them by their social network (Kessler *et al.*, 1985).

Besides the extra burden placed upon women as the main providers of social support, there are *reciprocity costs* entailed in social support utilisation. Recipients of support can receive both benefits and costs (Antonucci *et al.*, 1990; Brown and Phillips, 1986; Hobfoll *et al.*, 1990; Rook, 1990). While recipients can benefit by receiving social support, norms of reciprocity and equity may make the recipient feel that he/she should repay the support received. This may reduce the probability that one will ask for help and/or reduce the amount of help one may accept and utilise in times of stress.

The **'Conservation of Social Support Resources Theory'** proposed by Hobfoll, Freedy, Lane and Geller (1990) may be particularly pertinent here, with regard to women's role as donor and recipient of support and the costs entailed in providing and receiving social support for women.

According to Hobfoll *et al.*, (1990), individual's strive to maintain social support both to meet their needs to preserve particular resources and in order to maintain their identity. They propose a resource-identity model (See Figure 6.6) in which individuals possess a given level of personal resources and have access more indirectly to a given level of social resources (one of which is social support). These resources enable them to offset the demands (ie. stressors), placed upon them by environmental circumstances. Social support received would be obtained from the sphere of social resource reserves while social support provided would be issued from the personal resource reserve.

Hobfoll *et al.*, (1990) note that both of these resource reserves are finite and may become depleted. Consequently, two factors come into play with regard to gender, women and social support utilisation. That is, although women may rely upon and utilise social support more

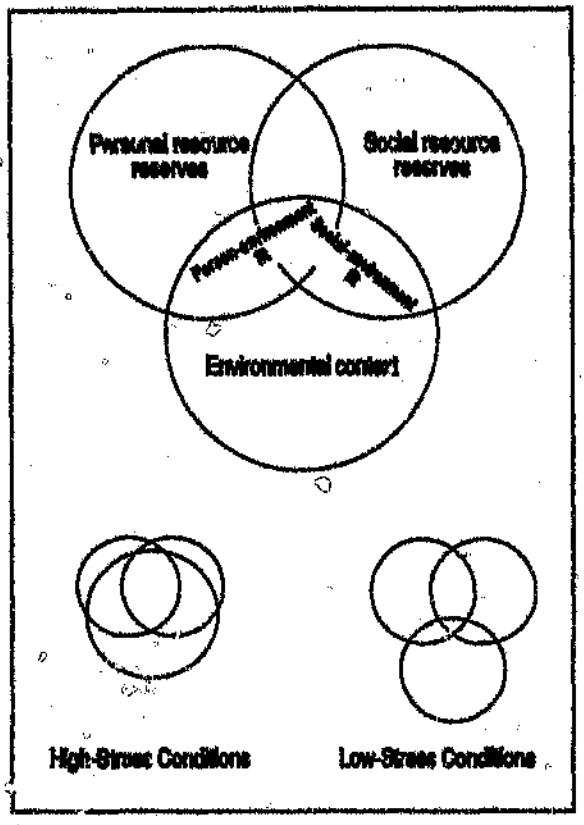

FIGURE 6.6 A Resource-Identity Model

(Adapted from Hobfall, Freedy, Lane and Geller, 1990).

often than men; as major providers of support to others, the costs entailed in reciprocity, which may *add* to their burden as support providers, may hinder their usage of this coping resource. When these women are exposed to additional environmental demands they may thus be reluctant to draw on their reserve of social support resources as this may entail that they reciprocate by providing support to the current provider at some later stage. The costs entailed in such reciprocity, in the light of their already depleted personal resources, may therefore inhibit their usage of social support. At this point the decision on whether to conserve personal resources by not using social resources or whether to further deplete personal resources by using social resources, represents a decision between two "potential loss spirals" (Hobfall *et al*, 1990, pg. 473). Thus, at the point where the respondent's beliefs regarding the efficacy of seeking or accepting help from others in problem situations are outweighed by the costs of reciprocity, the utilising of social support becomes hindered.

Other factors with regard to gender, that may have inhibited utilisation of social support pertains to the source of support. Research has indicated that women may prefer to utilise co-worker support and family and friends support in times of stress (Ganster and Victor, 1988). For example, Ganster, Fusilier and Mayes (1986) indicated that women benefited more from

co-worker support. Etzion (1984), in turn, reported that in certain circumstances, women were more likely to benefit from non-work sources of support and that support at work, in some instances, may actually prove to be detrimental.

Possible reasons for this preference may relate to the *relationship characteristic* of *degree of intimacy* between support recipient and support provider. A number of researchers have identified the degree of intimacy as a critical determinant in support utilisation. Hobfoll, Nadler and Lieberman (1986) and Cutrona, Cohen and Igram (1990) note that the degree of closeness to the support provider is a key determinant of both satisfaction with support and the effectiveness of support in moderating the effects of stress. Intimate relationships provide one with a sense of security and safety which may facilitate coping with adverse circumstances. In addition, individual's who share a close relationship understand one another's needs and preferences and can thus, provide assistance that is more closely tailored to the person's specific situation than could a less intimate associate.

This body of the research literature notes that degree of intimacy may be more critical for women than for men. This may be so as early socialization and role constraint experiences may encourage women to be both more intimate and caring in their relationships with others and to require more intimacy if they are to consider such relationships to be supportive, as opposed to men. Stokes and Wilson (1984) and Rosario *et al.*, (1988) suggest that stereotypical male patterns of socialisation, with their emphasis on autonomy, self-reliance and independence, hinder development and use of social support and a need for intimacy. Women, on the other hand, are stereotypically socialised to be warm, expressive and intimate. Early socialisation experiences encourage girls to act in a gentle manner and the expression of personal feelings in their social interactions are considered to be acceptable. This attitude is further facilitated by modelling processes which lead to the imitation and internalisation of maternal caring behaviour. Boys, on the other hand, learn through role constraint, to repress emotion and strongly inhibit their expression of personal feelings. This inhibition of emotional expression and an urge to behave autonomously, ultimately inhibits mens' capability to ask for social support as well as inhibits the degree to which they require intimacy in their relationships. The socialisation of women, on the other hand, encourages use of social support and desire for intimacy (Stokes and Wilson, 1984; Rosario *et al.*, 1988).

As supervisory-subordinate relationships are not usually characterised by a high degree of intimacy, this factor could have hindered the utilisation of support from this source for women, while men, in general, may resort to the use of such a coping strategy to a far lesser degree.

In the present study 69.8% of the sample were female and 30.2% of the sample were male. The lack of evidence for the moderating effect could thus be possibly attributed to women's reluctance to use this resource if they felt that the obligation it entailed may deplete their reserve of personal resources. In addition, if the supervisory relationship did not contain the desired degree of intimacy, women may not have sought out support from this source. Men on the other hand, because of their early socialisation experiences, may have been reluctant to utilise support at all, instead, preferring to use other coping strategies.

It is, however, important to note, that although women may prefer to use other sources of support and although men may prefer to use other coping strategies entirely in times of stress, this does not negate against the importance of supportive supervisors in the workplace. As mentioned previously, supervisors as role senders, can reduce the amount of ambiguity, conflict and overload that individuals experience at work. That is, they can reduce the amount of stress that subordinates may experience which, in turn, has a positive direct effect on individuals' health and well-being. In the absence of such stress, supportive supervisors can still have a positive effect on subordinates health and well-being. This could occur as their supportive behaviour may lead to their subordinates' feeling that they are valued, and important with regard to the job they do, this in turn, leading to a positive effect on job satisfaction, intention to stay in one's job, psychological well-being and self-esteem (Ganster *et al.*, 1986; Winnubst *et al.*, 1988).

RACE, SOCIAL CLASS, EDUCATION AND SOCIAL SUPPORT UTILISATION

As mentioned previously, South African society is stratified along racial lines. This has had the general effect of stratifying education and social class along racial lines. By and large, Whites are those who have the greatest access to educational opportunities. By virtue of this fact, they are in possession of the greatest degree of education, and therefore are employed in more highly paid jobs. It is, thus, this racial group which constitutes the middle and upper classes. Blacks, on the other hand, deprived of the same educational opportunities, make up the lower classes. They occupy the lowest paid jobs and work in fields were they have the least job autonomy. The effect that these factors can have upon social support utilisation is outlined by a number of researchers:

With regard to **education**, George (1980) notes that more education appears to foster a cognitive complexity that facilitates realistic stress perception and greater problem solving skills. Research in this area has also found that greater education was related to more positive self-perceptions, a greater sense of self-esteem and mastery and a greater readiness to deal with complexity and novelty (Eckenrode, 1983; Pearlin and Lieberman, 1979; Shanan, Kaplan,

Nair and Garty, 1976).

Related to the findings on education are those on **social class**, with evidence suggesting that lower status groups are more exposed to undesirable, uncontrollable events than higher status groups. The latter are also less affected by undesirable and uncontrollable events as they have "the sort of personality characteristics - feelings of self-esteem, confidence, perseverance - that are the stuff of competent problem solving" (Cleary, 1978, p.472). Research has also demonstrated that socio-economic status is positively related to greater ego-strength. In addition, research has shown that low socio-economic origins in childhood are associated with a poorer learning environment for acquiring coping resources such as social support (Worden and Sobel, 1978).

In the present study, 63.5% of the sample were matriculated and 18.6% had a post matric qualification. In addition, subjects in the sample were predominantly white (69.7%). Thus, a large proportion of the sample was made up of those who were educated, and who constituted a higher status group. To the extent that this may have lead to these subjects having greater control over the experience of undesirable events, and possessing a greater sense of self-esteem and mastery, this could have enhanced their ability to deal with stress, and could have lead to the utilisation of other coping resources besides that of social support.

RECIPIENT CHARACTERISTICS: HARDINESS, CONTROL, SELF-ESTEEM AND MASTERY

With regard to recipient characteristics those that have been noted in the literature as influencing social support utilisation are personality hardiness, locus of control, self-esteem and mastery, all of which can lead to variations in the *need* for support (Hobfoll, 1985; Kobasa, 1982; Nadler, 1983). The need to discuss these variables arise, not only because of their influence upon social support, but also because as indicated by the previous discussion, they are, to some extent, *correlates* of individual level of education, social class and race.

HARDINESS, CONTROL AND SOCIAL SUPPORT UTILISATION

With regard to the hardy personality, hardiness is a personality construct comprised of three dimensions, namely, a sense of **commitment** reflected in a tendency to involve one's self fully in the different spheres of one's life; the perception of events as **challenges** rather than threats; and the experiencing of a sense of **control** over events in one's life rather than a lack of control. That is, an internal locus of control versus an external locus of control (Barling, 1990; Kobasa, 1982).

A number of researchers have noted that hardiness and locus of control can influence the extent to which individuals perceive demands to be a threat and the extent to which individuals perceive and utilise social support (Fusilier, Ganster and Mayes, 1987; Johnson and Sarason, 1978; Lefcourt, Martin and Saleh, 1984; Sandler and Lakey, 1982). Although these researchers note that those possessed of a greater degree of hardiness and an internal locus of control may more actively seek out and use social support resources and are more likely to benefit from such support, it is also possible that such individuals may feel *less need* for support. These individuals may feel sufficiently in control to not need to seek out support, leading in turn, to a lack of observation of any moderating effects, because social support is not sought out, mobilised and utilised (Fusilier *et al.*, 1987; Ganster and Victor, 1988).

Based on this research two possibilities become evident as to why social support did not moderate the relationship between stress and strain in the present study, or, alternatively phrased, as to why only main effects were reported.

(1) Hardiness/Control may have acted as a moderator in its own right. Thus moderating may have occurred, (though not by social support), leading to the observations of reduced stress and strain, or

(2) Hardiness/Control may have conditioned usage of the moderator assessed in the present study, namely, supervisor social support in that subjects, by virtue of the fact that they may have been more hardy or more in control, did not feel the need to call on this support resource in times of stress.

SELF-ESTEEM, MASTERY AND SOCIAL SUPPORT UTILISATION

A number of researchers have indicated that social support can bolster flagging self-esteem and sense of mastery in the event of high stress (Thoits, 1985; Hobfoll, 1985). However, in the event of individuals being in the possession of high self-esteem and mastery *prior* to the experience of stress, this can effect the extent to which they would utilise social support in stressful times.

Hobfoll (1985) notes that persons with high self-esteem and a sense of mastery are shown to have a less immediate need for social support than those with lower self-esteem. They rely on this high sense of self-esteem as an internal resource when confronted with stressors. If, however, stressors are ongoing and perceived to be extremely threatening, internal resources may become depleted. At this stage social support can "act as a buoy to sinking self-regard" (Hobfoll, 1985, p.398).

Pearlin, Lieberman, Menaghan and Mullan (1981) refer to mastery or efficacy-based self-esteem as arising from adequate or above adequate performance of role-related tasks and successful environmental control. According to Hobfoll and Shoham (1989) and Hobfoll and Freedy (1990), mastery might serve as an *executive resource* that determines the use of social support resources. They suggested that those that are high in mastery would use social support judiciously. That is, these individuals would resort more to personal resources - rely more on their personal strengths - in coping with stress than social resources (See Figure 6.6). Only in the event of extremely high stress would such individuals utilise social support.

To the extent that subjects in the present sample may have been high on these resources, prior to the experience of stress, this may have lead to them having little need to utilise available social support resources, thus, explaining the lack of observation of moderating effects of supervisor social support.

RELATIONSHIP CHARACTERISTICS

Other factors that can constrain the utilisation of social support relate to provider and relationship characteristics and the extent to which individuals feel *discomfort* in seeking out and utilising social support (Dunkel-Schetter and Skokan, 1990; Hobfoll and Freedy, 1990; Jung, 1989; Newcomb, 1990). Discomfort in seeking out support can arise due to a number of factors. As mentioned previously, intimacy of the relationship between support recipient and provider may be a critical determinant of whether an individual will seek out and utilise social support. Because the supervisor-subordinate relationship is not usually characterised by a high degree of intimacy, subordinates may feel embarrassed to request assistance as they may feel that it would be regarded as an imposition. Asking for help may lower the quality of its helpfulness in the mind of the recipient who may feel guilty for imposing (Cutrona, Cohen and Igram, 1990).

Discomfort in seeking out social support may also be caused by the *negative impact* such behaviour can have on self-esteem. A section of the social support literature has focused on the negative impact of social support, reporting that there are self-threatening aspects associated with receiving aid (Fisher, Nadler and Whitcher-Alagna, 1982, Hobfoll, Nadler and Lieberman, 1986; Nadler and Mayseless, 1983). It has been noted that dependence on others may imply inferiority. Because of this, being helped may pose a threat to one's self-esteem, implying that one is incompetent and unable to resolve his/her own problems (Jung, 1989).

Thus, in terms of self-esteem, the asking for and accepting of social support can have two effects. On the positive side, support can enhance self-esteem which in turn can enhance

one's belief that one can cope with the stressor situation more effectively. On the negative side, social support may be threatening if it implies a superiority-inferiority relationship. That is, if it conflicts with a recipient's values of self reliance and independence and/or it requires the recipient to admit to impairment. Employees may thus feel reluctant to seek out support from their supervisors as by so doing they may feel that it entails an admission of weakness, signalling that they are unable to cope with their work. The fear of being negatively evaluated may restrict employees from utilising social support from their supervisors. This fear may be particularly pertinent in the context of the work setting and the supervisor-subordinate relationship as a label of incompetence can threaten one's career and job opportunities (Marcelissen *et al.*, 1988).

Thus, if subjects in the present study felt that utilisation of social support would entail to many costs in the form of admitting impairment and incompetence, they may have not resorted to drawing on this resource, which may serve to explain the present study's lack of observation of interaction effects.

Reluctance to draw on social support resources may in turn be affected by the extent to which the relationship between provider and recipient is *conflicted* or *unconflicted*. Many have argued that concern with the positive or health promoting aspects of social relationships should not preclude recognition of their negative or health damaging effects in the event of relationships being characterised by conflict (Antonucci, 1985; Barrera and Baca, 1990; House Umberson and Landis, 1988).

According to Barrera and Baca (1990) help elicited from a provider with whom a recipient has a conflicted relationship can lead to lowered self-esteem, denigration of the donor or devaluation of the help received. Obtaining aid from a source with whom conflict exists could create an obligation for reciprocity with a person who is disliked and/or it could create the need to restore equity by devaluing the aid received. Through these mechanisms, conflict within a provider/recipient relationship could thus 1) hinder the utilisation of social support and 2) if social support was utilised, hinder the positive evaluation of such a supportive transaction.

In addition, in certain instances, the *source of support* may, in fact, be the *source of stress*. As mentioned previously, supervisors, as role senders, are in a unique position to reduce the amount of ambiguity, conflict and overload inherent in an incumbent's work tasks (Winnubst, *et al.*, 1988). However, as role senders they can also *increase* the amount of ambiguity, conflict and overload for an employee. Thus to the extent that supervisors may be the source of stress experienced at work, creating a situation with conflictual possibilities, it is unlikely that

employees will utilise their supervisors as a source of support in alleviating the self-same stressors that they perceive their supervisors to be the cause of.

In the present study a negative relationship was reported between supervisor social support stress and strain. This may indicate that in the event of high stress, support was low, leading to an unavailability of this particular resource as a stress buffer in times of such high stress. Due to lack of norms against which the present sample could be compared, subjects were not segregated into high, medium and low stress conditions. Consequently, the possibility that there was a high stress condition as opposed to a low stress condition, and that this high stress condition was a reflection of stress created by an unsupportive supervisor, may explain why no moderating effects were observed.

The notion that moderating, in fact, occurs under conditions of high stress only, is a notion that is at the *core* of the moderating hypothesis (Sarason, Pierce and Sarason, 1990). In the event of lack of stress or low stress, social support will have a main effect only. The experience of a high degree of perceived stress is required, in order to motivate the individual experiencing the stress to mobilise and utilise social support (House, 1981).

As the sample used in the present study was not dichotomised into high/low stress conditions, a determination of whether individuals in the sample were in fact experiencing a low degree of stress is not possible. If, however, this was the case, it could partly explain why no significant moderating effects were observed.

Failure to distinguish between high and low stress conditions arose due to lack of norms against which the present sample could be compared. In addition, although role conflict, ambiguity and overload are considered to be "normatively" stressful events, the *degree* to which they are perceived to be stressful depends on the personality of the individual exposed to such stressors. As mentioned previously, individuals who are hardy, possess an internal locus of control, and are high on mastery and on self-esteem are less likely to view situations as stressful. In fact, in certain instances they may regard stressors as *challenges* rather than threats (Kobasa, 1982). Even in the event of their perceiving a demand to be stressful the extent of threat perceived is likely to be less than that perceived by non-hardy externals low on self-esteem and mastery.

SUMMARY AND CONCLUSION

From the above discussion of sociodemographic variables, and recipient, provider, and relationship characteristics, it becomes apparent that these factors can alter the degree to

which individuals perceive demands to be stressful. In addition they can influence the need for social support, with individuals high on selected personal resources possibly preferring to rely on themselves rather than others in times of stress. Relationship factors, such as degree of intimacy may operate in a manner that inhibits social support utilisation. In addition, there is the theory of Social Exchange which proposes that there are costs entailed in social support utilisation such as reprocity and negative impact on self esteem (Hobfoll, 1985, Antonnucl *et al.*, 1990). All of these factors have been offered as tentative hypotheses to explain why subjects in the present study may not have utilised social support resources and thus, why no moderating effects were observed.

The impact that these factors can have upon the utilisation of social support makes it apparent that social processes do not occur in a vacuum (Vaux, 1990). According to Vaux (1990) and House, Umberson and Landis (1988) social support must be viewed as a complex process unfolding in an **ecological context**. That is, support takes place within a social ecology and is shaped by characteristics of the person and the social context within which it occurs. The utilisation of social support and observation of such processes may, thus, be contingent on the personal and social assets and liabilities of individuals involved in social transactions as well as on the *ecological niches* that these individuals occupy (Vaux, 1990, p.512).

The adoption of such an ecological view enables one to address a number of limitations apparent in both previous research and in the present study. The following section is, consequently, devoted to a discussion of both the limitations and theoretical and practical implications of the present study, along with proposals as to how these issues may be addressed in future research within the context of an ecological framework. In addition, the *advances* that the present study represents in terms of its ability to add to the body of social support theory and research will also be mentioned. However, before going on to discuss limitations, implications and advances, one other finding of the present research needs to be discussed, namely, the non-significant main effect of role overload on propensity to leave one's job.

NON-SIGNIFICANT MAIN EFFECTS

ROLE OVERLOAD AND PROPENSITY TO LEAVE

Only one non-significant main effect was observed in the present study, namely, the non-significant main effect of role overload upon propensity to leave.

One possible explanation of this finding relates to the timing effect of social support. As

mentioned moderating effects can go unobserved if subjects are not examined at the precise time that the reinterpretation involved in the moderating process takes place. It is thus possible that instrumental support, the moderating effect of which has been documented in a number of studies, (see Kaufmann and Beehr, 1989; Cohen and Wills, 1985; Jayaratne, Himle and Thyness, 1988; McIntosh, 1991), may have moderated the effect of role overload on propensity to leave. This moderating effect may have been so significant that it completely masked the impact of role overload on propensity to leave. If this actually occurred and subjects were observed *after* this moderating had been completed all that would have been evidenced is the main effect of instrumental support on propensity to leave and no effect at all of role overload on this dependent variable.

In addition, the main effect of instrumental support upon the *perception* of role overload was not assessed. It thus, remains possible that instrumental support could have been successful in reducing the perception of this stressor as a threat, to such an extent that it had no impact upon the propensity to leave of the subject exposed to it.

LIMITATIONS OF THE PRESENT STUDY

There are two important limitations with regard to the present study, both of which have theoretical and practical implications for future research strategies. These two limitations pertain to 1) the experimental design and 2) the model of stress utilised in the present study.

LIMITATIONS OF CROSS-SECTIONAL RESEARCH DESIGNS

In the present study a cross-sectional research design was adopted in order to assess the relationship between specific types of support and specific stressors and strains. Prior to the testing of these relationships, the present research entailed the development of a new, and to some extent unique, measurement tool specifically designed to measure different dimensions of supervisor social support. As the *main emphasis* of the present research was to develop a unique and more advanced measure of supervisor social support and to assess the utility of such a measure in terms of its concurrent, criterion-related validity, use of a cross-sectional design was considered to be appropriate.

However, there are a number of problems inherent in cross-sectional/correlational techniques that limited the conclusions that could be drawn with regard to the findings of the second phase of the present research. According to Dooley (1985) such methodologies are vulnerable to a number of important threats to their internal validity, that is, to a number of plausible

alternative explanations. Two of the most prominent threats to internal validity in correlational, cross-sectional designs relate to (1) **Causality** and (2) **Spuriousness.** Below follows a discussion of these two internal validity threats:

The issue of causality in social support research, that is, whether social support causes good health or whether good health enables one to better experience social support, is one that has been questioned by many researchers (Contrada and Krantz, 1987; Heller, 1979; Kasl, 1987; Kessler, 1987; Leventhal and Tomarken, 1987). They argue that much of the research pointing out the correlation between general lack of support and increased incidence of physical and mental disturbance could be reinterpreted by focusing on the rival hypothesis that those that are most healthy are those most likely to have better social relationships or, conversely, those with poor health are likely to have poorer social relationships. For example, some kinds of illnesses such as depression or terminal cancer may prevent or inhibit social activity that leads to making and keeping friends or may frighten away existing friends.

In addition, naturalistic studies generally confound the availability of support with other factors such as the ability of the individual to elicit, utilise or maintain supportive relationships (Schradle and Dougher, 1985). This confounding can result in spuriousness, that is an over or under-inflation of findings due to the influence of other extraneous variables operating in conjunction with the social support process. As mentioned in the discussion on sociodemographic, recipient, provider and relationship characteristics, variability in these characteristics may lead to differential perceptions of stress and differential perceptions and utilisation of social support. Thus the moderator may be *conditioned* by other variables which are extraneous to the proposed model (Dooley, 1985; Ganster and Victor, 1988).

There are numerous ways of controlling for these internal validity threats. One way is to use experimental manipulation where subjects are randomly assigned to manipulated high or low support conditions and where independent variables such as stressors and moderating variables such as social support are carefully controlled and manipulated. Such research is, however, rare as there are serious ethical considerations in such experimental manipulation. Also such manipulated support is by definition not 'natural' (Dooley, 1985).

Other methods of controlling for spuriousness and reverse causation are through usage of (1) **Longitudinal Research Designs** (2) **Multi-variate Analysis.** The following sections will be devoted to outlining the advantages that these two methods represent over the cross-sectional design used in the present research. However, these sections will also note that although these methods represent an improvement over cross-sectional designs they are not a

panacea. They too have inherent disadvantages and in some instances these disadvantages may outweigh those of the frequently denigrated cross-sectional method (Kessler, 1987).

CAUSALITY AND THE LONGITUDINAL RESEARCH DESIGN

A number of researchers have proposed that utilisation of a longitudinal research strategy represents the best means of overcoming issues of causality and reverse causation. According to Contrada and Krantz (1987), the fact that all variables are studied at only one point in time in cross-sectional designs, sets the stage for several rather severe impediments with regard to establishing cause-effect relationships. They propose that the consequences of these impediments are that the data may reveal an association that is quite unlike the true nature of the aetiologic process under study. More specifically, it is quite plausible that the outcome or outcome-related factors have affected the putative risk factor and/or its assessment (Contrada *et al.*, 1987).

With specific regard to social support, Cohen and Wills (1985) note that findings obtained in cross-sectional studies are amenable to three alternative causal explanations. They may reflect social support causing changes in symptomology, symptomology causing changes in support level (reverse causation) or (to be discussed in the following section), they may reflect other factors, ie. recipient characteristics and socio-demographic variables causing changes in stress perception and/or social support utilisation.

Contrada and Krantz (1987) and Cohen and Wills (1985) suggest that the best way to avoid these consequences is to use prospective, longitudinal research designs. In a prospective study, a sample of initially healthy subjects is assessed for known and potential risk factors and then followed with careful monitoring for the onset of a new disease. By establishing such temporal ordering of suspected cause and effect, the prospective design substantially increases confidence that the risk factor is of aetiological significance (Contrada *et al.*, 1987; Kasl, 1985). With special reference to the study of social support, Hobfoll, Freedy, Lane and Geller (1990) note that one needs to adopt baseline, pre-test, post-test, follow-up intervention designs. If individuals can be observed *prior* to the experience of a stressful event, *during* the experience of the event and *after* the experience of the event; in conjunction with the period in which social support is made available and mobilised and utilised, then the chances of observing a moderating effect and determining causality will be greatly enhanced.

Cohen and Wills (1985), in turn, propose an analytic model in which one obtains two-wave data where Time 2 symptomology is the criterion and Time 1 stressors and social support are the predictors. Symptomology at Time 1, measured at a time prior to Time 1 stress and social

support, is included as a control variable (see Figure 6.7).

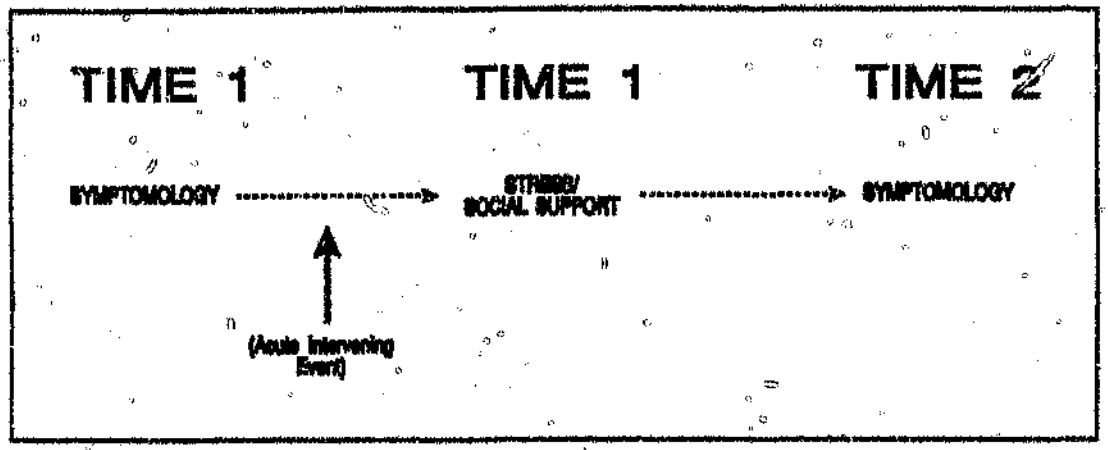

FIGURE 6.7 Temporal Lags in Longitudinal Study

The use of such an analytic model may thus help to rule out the possibility that results are attributable to pre-existing symptomology causing or reducing subsequent stressors and/or causing changes in or degree of availability and utilisation of social support. A problem however, arises with regard to the point at which Time 1 Prior Symptomology is assessed. Kessler (1987) notes that if one is mistaken with regard to the time lag selected for measures of prior symptomology and the actual longitudinal analysis, then bias can be introduced into the prediction equation. Below follows a discussion of the problems entailed in the incorrect selection of temporal lags in longitudinal designs.

THE SELECTION OF TEMPORAL LAGS

Observation of respondents at a single point or at desegregated points in time is complicated by the selection of *temporal lags*. Cohen and Wills (1985) note that it is critical to consider the correspondence between longitudinal intervals, the time course of the criterion disease and the stability of social support in the population under study when deciding on the use of a prospective analysis. In turn, Leventhal and Tomarken (1987) note that unless the correct temporal lags are chosen, longitudinal design may do little to improve one's knowledge of causation and may, in fact, provide less accurate data on casual connections than the frequently denigrated cross-sectional study.

For example, one may propose that role stress has a negative impact on self-esteem.

However, it is possible that poor self-esteem can lead to greater perception of threat with regard to role stress. In order to control for this the researcher therefore, decides to measure self-esteem at a point prior to the measurement of role stress and its subsequent impact on self-esteem. If between the time of measuring self-esteem initially and the assessment of role stress, there is the occurrence of some acute event that leads to significant erosion in self-esteem, the relationship between stress at Time 1 and self-esteem/strain at Time 2 may be greatly inflated and/or erroneous (See Figure 6.7). That is, the unmeasured poor, eroded self-esteem, occurring between the measurement of Time 1 symptomology and Time 1 stress, could have caused greater stress perception and led to a further erosion of self-esteem at Time 2. As the researcher is only aware of the level of self-esteem measured at Time 1, an assumption will be made that stress leads to poor self-esteem and not that poor self-esteem increases stress perception.

With regard to social support, poor selection of the time lag can also confound the attempt to determine causality. In the time between the initial measure of self-esteem and social support if an acute event occurs that erodes self-esteem this can lead to poor perception of social support availability. Subsequently, the relationship between social support (Time 1) and self-esteem measured at Time 2 becomes inflated or is erroneous. That is, the unmeasured poor self-esteem leads to poor perception of support availability and a possible further erosion of esteem. In this instance it would be incorrectly assumed that poor social support had a negative impact on self-esteem.

An additional proposal evident in the literature is that longitudinal studies better enable one to observe significant social support interaction effects. However, with regard to the temporal dimension of the social support moderating process, although it has been suggested that longitudinal designs increase the possibility that one observes the process in operation, this may depend to some extent on the measurement techniques used. Below follows a discussion of longitudinal design in relation to social support's temporal dimension, along with a discussion of the appropriateness of certain measurement techniques used within such a design.

THE LONGITUDINAL DESIGN, THE TEMPORAL NATURE OF SOCIAL SUPPORT AND TECHNIQUES OF MEASUREMENT

It has been suggested that the need to assess social support longitudinally may be especially necessary due to the temporal dimension of the moderating process of social support.

As mentioned previously, the moderating process occurs over a specified period of time (House, 1981; Jacobson, 1986). In the event of a cross-sectional design being used, if subjects

are not observed at the precise time in which moderating is taking place, the observation of any interaction effects will go undetected (House, 1981).

A prospective analysis such as that suggested by Hobfoll *et al.*, (1990) above should thus, be best in order to observe moderating effects. Within such an analysis subjects would be observed prior to the stress experience, at the time of experiencing stress, at the time of social support mobilisation and utilisation (if any occurs), and after the completion of such a process. A post-test measure of strain could then determine whether social support moderated the relationship between stress and strain, while controlling for strain measured in a pre-test would enable the determination of reverse causation. This strategy would however be limited if one only uses a questionnaire technique.

LIMITATIONS OF THE QUESTIONNAIRE TECHNIQUE

According to Lieberman (1986) trying to capture moderating relationships that are fluid and that change over a period of time with a questionnaire technique that is static and represents one point (in a cross-sectional design) or at best, several points (in a longitudinal design), may well be unachievable. He argues that it is unreasonable to assess "the complex, changing, and fluid envelope that characterises (social support relationships) with snapshot research strategies" (p. 465). Using such a technique, it is possible that subjects, although they are observed at two or more points in time, may still be observed at times when moderating is already completed. Thus, even in the instance where a longitudinal research design is employed using a questionnaire technique, this may not necessarily ensure the possibility of observing a moderating effect. All that may occur is the observation of subjects at several points in time, all of which may be *after* the process of moderating has taken place,leading to the observation of main effects only.

SUMMARY AND CONCLUSION

The use of a cross sectional design in the present study was mentioned as a limitation with regard to its ability to determine causality and capture moderating effects. It was proposed that the longitudinal research design was the best means whereby such causality problems and problems associated with observation of moderating could be overcome. There were however a number of problems inherent in the latter method. These pertained to the selection of temporal lags and the measurement techniques that one uses.

In the light of the above discussion, it thus appeared that

(1) accuracy in temporal measurement is one of the most crucial factors in inferring causation, and that

(2) correct selection of measurement techniques is crucial in order to observe the moderating process.

Leventhal and Tomarken (1987), in fact, state that inaccurate specification of temporal lags can lead to greatly attenuated or highly misleading estimates of the causal relationships among stressors, illness and moderators of the stressor-illness linkage. In addition, ignorance of the precise causal time course heightens the possibility that observed relationships are not the product of a causal linkage but are spurious. Kasl (1987) thus notes that although one must aim to raise "investigators consciousness regarding methodological sophistication" (p.308) one also needs to recognise the limitations of superior methodologies. Opting for a change in research design may entail the inevitability of *trade-offs* as although the longitudinal design lessens some problems it may increase others.

One specific instance of this relates to the matching up of subjects responses from Time 1 to Time 2. In phase one of the present study subjects indicated that they were reluctant to provide their names with their responses as they felt that this may jeopardise their careers. Rather than insist upon this, it was decided that a cross-sectional research design would be used. The latter was the preferred option as the possibility existed that subjects forced to fill in their names on their responses might not have given *true* responses to the sets of scales contained within the questionnaire. That is, they may have responded with a large degree of response bias and rather than jeopardise the accuracy of the data, it was felt that a longitudinal research design should be abandoned.

It is also important to note that the main aim of the present study was to develop a reliable and valid measure of supervisor social support that could distinguish between the four social support dimensions proposed by House (1981). A secondary aim was to assess the differential impact of these different types of support in specifically selected stress-strain relationships. This also allowed for the establishment of the scales concurrent criterion related validity. The longitudinal assessment of the differential impact of support types in selected relationships was thus considered to be beyond the scope of the present study, rather it remains as a task for future research.

SPURIOUSNESS AND MULTI-VARIATE ANALYSIS

Another important limitation of the present research relates to spuriousness. According to Kasl (1983, 1987) and Leventhal and Tomarken (1987) the influence of individual differences that can condition stress and social support perception and utilisation of social support can confound findings by creating spuriousness. A means of overcoming spuriousness is through

the use of *multi-variate analyses*. The use of such an analysis, where measures of supposed confounding variables are included in the design, can enhance both cross-sectional and longitudinal studies in terms of checking spuriousness. In such an instance the effects of statistically confounding variables can be assessed and if such effects are found to exist they can be statistically removed or partialled out (Dooley, 1985).

With regard to the use of a multi-variate analysis, this requires that one adopts an *ecological perspective* of the stress-social support process (House, Umberson and Landis, 1988; Schwarzer and Leppin, 1990; Vaux, 1990). If one adopts such a perspective it is possible that the transactional model of stress used in the present study was not completely adequate (Hobfoll, 1989; Hobfoll and Freedy, 1990; Hobfoll, Freedy, Lane and Geller, 1990).

Although virtually all stress investigators accept the transactional view of stress, it is possible that such a view is not sufficiently complete when studying social support within an ecological perspective. A more advanced theory, developed subsequent to that proposed for the present study, is that termed "**Conservation of Resources (COR) Theory**", proposed by Hobfoll (1989).

This theory follows from the basic motivational tenet that people strive to obtain and protect their personal and social resources and that they experience stress when circumstances threaten or result in loss of these valued states. From this basic premise emerges the definition of stress. Stress is defined as a *reaction* to the environment, in which there is either the *threat* of a loss of resources, an *actual loss* of resources and/or *lack of resource gain* following investment of resources. *Resources* are defined as material possessions, personal characteristics, valued environmental conditions (eg. job security), social resources, and the means for attainment of these resources which is a resource in itself (Hobfoll and Freedy, 1990; Hobfoll, Freedy, Lane and Geller, 1990).

Hobfoll *et al.* (1990) note that such a theory does not make the transactional model of stress redundant. Rather, it improves upon it. These improvements are represented by its ability to predict behaviours both during stressful *and* non-stressful circumstances, which is something the transactional model does not make allowances for. In addition, it expressly sets out a role for social support as a *purveyor* of resources from others, suggesting that turning to social support can lead to the incurring of significant *costs* as well as rewards. It also sets out the proposition that individuals have many resources (other than those of social support) and that they may often substitute one for another. It is however, similar to the transactional approach in that it does assign a role to cognition and views coping efforts as capable of moderating the

impact of stressors (Hobfoll *et al.*, 1990).

Use of such a model would thus, have broadened the scope of the present study in that it could have lead to the incorporation of the assessment of variables such as sex, race, class, education, mastery and locus of control. The inclusion of such variables would have enabled a determination of the effect, if any, that they had upon stress perception and social support utilisation. This determination would consequently reduce the threat of spuriousness with regard to demonstrated findings.

However, adopting such an approach with such a broad scope does, in itself, have certain limitations. Kessler (1987) and Leventhal and Tomarken (1987) note that there are problems in the multivariate control approach.

According to Kessler (1987) researchers seldom understand *all* the determinants of a particular variable sufficiently well to include all relevant control variables in the prediction equation. He notes that "no statement whatever can be made about the direction or magnitude of bias introduced into the estimate of (a particular variable) by the omission of a relevant control variable unless the researcher has more understanding about the omitted variables than one usually has. (This) means among other things, that there is no reason to believe that an estimate of (any particular variable) obtained in a model with incomplete controls will be any more accurate than an estimate obtained in a model which omits control variables entirely " (p.118-119).

One way of dealing with this is to focus on a **single situation**, a procedure recommended by Kasl (1987) and Leventhal *et al.* (1987). By concentrating on a single setting one can discover the *full* range of interpretations and coping strategies that occur within its context and develop effective measuring tools for each. One could also develop more detailed knowledge of the types of outcomes occurring subsequent to stressor onset and focus upon those stress-process-outcome connections that offer a causal time frame for specific stressor-outcome combinations.

Such a fully specified theory thus attempts to model the constructive processes that intervene between a single stressor and strain, taking into account social, psychological and biological aspects of the stress process when doing so. In this manner, it will "define mediating and moderating mechanisms that can be assessed to test process-based hypotheses, suggest linkages of variables across levels (social to psychological and both to biological), and specify the temporal windows in which such linkages occur" (Leventhal and Tomarken, 1987; p.45).

CONCLUSION

With regard to the above recommendations and their relation to the present study, in the present research a multi-variate framework was adopted. However, this multi-variate framework was more specifically applied to the development of the Four Factor Supervisor Social Support Scale. The present study did not adopt multi-variate controls with regard to the assessment of personality difference and socio-demographic variables. As the main focus of the present study was, as mentioned, the development of a reliable and valid four factor measure of supervisor social support it was deemed to be beyond the scope of the present study to extend this multi-variate approach into the second phase of the research. It is however, recommended that future research be conducted using the present study's measurement tool, in smaller, single stress-support-strain settings where a multi-variate approach is adopted. By restricting the focus it will enable a greater determination of relevant control variables, allowing for the measurement within the confines of a highly contained conceptual model; thereby reducing spuriousness in so far as is possible.

There are, however, a number of **other limitations** within the present study. These pertain to the **nature of the sample**, the **method of data collection**, that the **scales** used were **designed** for use on **overseas samples**, and that the **approach** adopted was purely **nomothetic**.

In the present research, the sample used was predominantly White (69.7%) and predominantly Female (69.8%). As mentioned previously, race, social class and gender can introduce variations into the way social support is perceived and utilised. Therefore additional testing of the applicability of the measure to other population groups as well as to a group in which males are more representative is thus required. In addition, the model was assessed on a white-collar sample employed within a large assurance organisation and a public utility company. As only two types of organisations were included in the study, the generalisability and applicability of the findings are restricted with regard to other organisational sectors. Future research also needs to focus on the utility of the measure on a sample of blue-collar workers.

It is therefore, required that the relationships between stress, support and strain assessed using the Four Factor Supervisor Social Support Scale, be examined, with this measure, across a broader range of organisational sectors and across a broader range of workers.

With regard to data collection, only one source was used, namely, self-report, paper-and-pencil tests. While all the instruments included in the study were considered to be psychometrically adequate, there are nevertheless, a number of problems associated with this method of data

collection. Self report inventories are especially subject to response biases such as social desirability and acquiescence and defensive tactics such as denial or rationalisation (Anastasi, 1982). Although the preamble attached to the questionnaire was designed to assure respondents that their responses would remain confidential, the possibility still exists that subjects may have been biased or defensive in recording their responses. Therefore, given the recognised limitations of using single self-report data sources, in the future, multiple sources of data collection, whereby measures of support received by the respondent are obtained from other sources such as that of the respondent's peers and co-workers and the respondent's supervisor, could be used to enhance the accuracy of the scores reported by respondents (Babbie, 1986).

In addition, most of the questionnaires used in the present study were designed for overseas samples (Chacko, 1985; Rahim, 1983). Strong reservations are usually expressed by psychometrists against using questionnaires constructed and standardised on one culture, on another culture for whom the measure was not initially designed. However, all of the overseas developed scales used in the present study have been previously used in the South African setting, with samples similar to the present one, and have been found to be psychometrically acceptable (Ballantine, 1989; Else, 1990; Bluen, 1986). According to Barling (1984) since the present study's sample was predominantly white, and since there is no research to indicate that white South Africans differ from their overseas counterparts, in terms of the white section of the present sample, this problem may not have been too evident.

A final limitation of the present study was its use of a nomothetic approach in which largely quantitative empirical research and survey methods were used. Use of an idiographic, qualitative approach in which techniques such as in depth interviews are incorporated could greatly enhance understanding of the social support concept.

ADVANCES REPRESENTED BY THE PRESENT RESEARCH

The previous section was devoted to a discussion of a number of limitations of the present research. However, in spite of these limitations, findings obtained in the present research also represent an advance over previous research, providing new insights in the understanding of the social support phenomenon.

Findings obtained in the first phase of the study (See Chapter 5) suggested that social support is indeed a multidimensional construct. However, these findings also suggested that, although social support may be multidimensional, one type of support, namely that of Emotional support,

is the dominant support type. In the second phase of the present study the widespread emotional social support effect upon all dependent variables provided further evidence for the dominant effect of emotional social support across all situations of stress and strain. In addition these findings also suggested that the other types of support do have more beneficial effects in specific situations of stress and strain.

What these findings obtained in the second phase also revealed was that the Four Factor Supervisor Social Support Scale could demonstrate a strong degree of criterion related validity.

Criterion Related Validity refers to the effectiveness of the measure in predicting an individual's behaviour in a specific stipulated setting (Kerlinger, 1986). The criterion, also known as the external indicator, represents the behaviour under investigation. The score obtained by the measure, also known as the predictor, is used to predict performance on the criterion (Walsh and Betz, 1984). There are two types of criterion related validity, namely, **Predictive Validity** and **Concurrent Validity**. What distinguishes the two is the element of time. Predictive validity is studied when the criterion is measured some time after scores are obtained on the predictor. The area of interest involves how the present score on the measure predicts future behaviour on the criterion variable. Concurrent validity is studied when both predictor and criterion scores are collected at the same time.

In the second phase of the present study the utility of the Four Factor Supervisor Social Support Scale was assessed in terms of its concurrent criterion related validity. That is, scores obtained by the measure where able to predict performance on the criterion or dependent variables in the manner hypothesised. This was demonstrated in the observation of significant main effects in all hypothesised stress-strain situations, with the exception of the main effect of overload on propensity to leave one's job. The effective utilisation of this four factor measure in the second phase thus provides future researchers with a reliable and valid multidimensional measurement tool, the utility of which can be further assessed when used in such future research.

THEORETICAL IMPLICATIONS OF THE PRESENT STUDY: RECOMMENDATIONS FOR FUTURE RESEARCH

Based on the above discussion of both the significant findings, advances, and limitations of the present research, a number of theoretical implications for future research become apparent.

With regard to the limitations, these suggest that there is a need for a longitudinal research design with a critical emphasis on correct selection of temporal lags. Future studies need to be more fine-grained with respect to the timing of social support, the establishment of the duration of stressor sequences and the duration of consequences of stress (Barling, 1990; Contrada and Krantz, 1987; Jacobson, 1986; Kessler, 1987; Schwarzer and Leppin, 1990).

There is also the need to adopt a multi-variate framework within the broad scope of an ecological perspective. According to Sarason, Sarason and Pierce (1990) and Leppin and Schwarzer (1990), one needs to adopt a more theory-driven approach in which potentially useful pathways to uncovering processes *underlying* social support can be identified. These pathways through which social support may be operating are represented by individual difference variables that can exert indirect effects on health that may even exceed the straightforward direct effect of social support. However, although this implies a broadening of scope it also entails a restriction of focus upon single settings of stress-support and strain, in conjunction with the identification of individual difference pathways proposed to be relevant to these single settings.

In addition, quantitative approaches can be enriched by combining such approaches with interview techniques where more qualitative data is collected. Data collection can also include objective reports of stress and support. What may be required in this instance is an *intervention approach*, conducted on individuals who are at present confronting a particular type of stressor or about to confront a particular stressor (Hobfoll and Freedy, 1990). Using such an approach, subjects can be observed prior to the experience of stress, at the time that they experience the stressor as well as during the time in which they mobilise and utilise social support resources made available to them to deal with the stressor/s. Data can also be collected both subjectively, from subjects under observation, and objectively, from the researchers as well as significant others in the lives of subjects experiencing the stressor/s. Within this period of observation, in-depth interviews can be conducted in order to establish whether or not the support the respondents perceive themselves to be receiving is adequate and what it is about the support received that they actually find helpful or not helpful in terms of the stress they are experiencing. Such qualitative data collection may then enable researchers to identify whether there are different helping behaviours that are perceived differentially by respondents and, if so, in what way do respondents find these different behaviours to be helpful in terms of dealing with the particular stressor/s experienced. On the basis of the data collected here researcher/s can obtain a more sophisticated and complete understanding of the social support process than that obtained when one uses a quantitative approach only.

In addition, in order to improve the generalisability and representativeness of findings, these specific stress-strain support situations need to be studied across a greater breadth of organisational sectors and across more varied samples.

With regard to the significant findings in the present study, namely that of across-the-board main effects and specificity of social support types in conjunction with a swamping effect of emotional support, these finding have a number of theoretical implications for future research.

The finding of main effects of supervisor social support upon all hypothesised relationships suggests that supervisors are, indeed, a very important source of work-site support especially with regard to their ability to structure work-roles (Ganster, Fusilier and Mayes, 1986; Winnubst, Maarcelissen and Buunk, 1988). Beehr, King and King (1990) and Kaufmann and Beehr (1989) suggest an approach aimed at studying *contents of communications* between supervisors and stressed employees. This approach may enable a determination of exactly what it is that supervisors offer employees in terms of support and exactly what it is that employees need in terms of support and in times of stress. This approach will facilitate measurement advances which, in turn will lead to advances in theory.

With regard to the findings of specificity effects occurring in conjunction with a widespread emotional support effect, according to Barling *et al.* (1988), there are some studies that have not found a widespread effect of emotional support, observing specificity effects only. That is, there are other studies that do not consistently find emotional support to be the most important type. For example, Cotterell (1986) found that only informational support improved the quality of mothers' child-rearing expectations and behaviour, while Schaefer, Coyne and Lazarus (1981) found that only informational support was related to positive morale in a group on senior citizens. In addition, it has been suggested that lack of informational support following the disaster at Three Mile Island was a major predictor of subsequent psychological distress (Chisholm, Kasl and Mueller, 1986).

More research is thus required in order to determine in what situations specific types of support only will have beneficial effects and in what situations is emotional support always beneficial either in conjunction with or independent of other types of social support. This approach would enable one to determine whether specificity effects could be replicated in other studies examining either the same relationships or different relationships developed on the basis of the theory of specificity. In addition, an assessment of the widespread emotional support effect across stress-strain relationships that are different to those studied in the present research would also enable a determination of whether emotional support is, in fact,

the most important type, operating across *all* stress-strain relationships.

With regard to an absence of any significant findings on the interaction effect of social support, although this may be attributable to individual differences, Tetzloff and Barrera (1987) suggest a *de-emphasising* of the moderator model. They propose an *additive model* in which the experience of a high degree of stress and lack of support contribute independently to the development of strains and/or conversely, the experience of low stress and the availability of support contribute independently to the maintenance or improvement of health (Williams, Ware and Donald, 1981). Such an approach in which the moderating model is de-emphasized and other models fully considered, will facilitate a better understanding of the complex relationships between types of support, types of stress and types of symptomology (Tetzloff and Barrera, 1987).

PRACTICAL IMPLICATIONS OF THE PRESENT STUDY: RECOMMENDATIONS FOR FUTURE RESEARCH

In addition to the theoretical implications that the present study's findings have for future research, such findings also suggest a number of practical implications for future social support study.

Perhaps the major practical implication concerns the *training* of supervisors with regard to the development of a socially supportive demeanour. The need to train supervisors to be supportive is suggested by the finding of the main effect of supervisor social support across all the dependent variables in the present study, which suggests that the supportive supervisor is, indeed, important in terms of enhancing both individual and organisational well-being.

Vaux (1991) outlines a number of training strategies that need to be considered in this regard. These are (1) improving utilisation of existing resources (2) improving management of support incidents (ie. improving skills involved in offering, eliciting and accepting supportive behaviour) and (3) facilitating positive subjective appraisals of support. Thus, supervisors need to develop sensitivity with regard to the needs of their subordinates when the latter encounter stress. In addition, they also need to made aware of the types of support behaviours that they could offer which would best help to alleviate a subordinates stress experience.

The examination of 'contents of communications' proposed by Heehr *et al.* (1990) can provide one with data on what is regarded to be supportive by subordinates. Based on this data, supervisors will acquire greater knowledge with regard to the type of help needed by

subordinates in the event of the latter experiencing any stress. In addition, with respect to social support utilisation, organisations need to make a concerted effort towards getting workers to perceive the work environment as supportive. At the same time, workers need to be encouraged to recognise cues indicating support and to engage in support-seeking behaviours (Jayaratyne, Himle and Chess, 1988).

House (1981) notes that the costs entailed in such programmes are relatively low and entail no major risks. Such efforts are likely to have a number of beneficial effects, research indicating that social support is a major contributor to improvements in job satisfaction, organisational commitment and intention to stay in one's job, all of which have implications for organisational effectiveness apart from its beneficial effects on individual health and well-being.

However, House (1981) notes that although support is a critical feature of most individual's social environment and a potentially effective lever for making social environments less stressful, more healthful and/or more conducive to the effective adaptation to stress, it is not the panacea for *all* problems of occupational stress and health. As discussed in previous sections, there are instances in which support can increase perceptions of stress and/or have a negative impact on health. However, by identifying situations in which is support can be either positive or negative, a point can be reached where research and theory can effectively inform intervention. In fact, intervention programs are likely, by virtue of their effectiveness or their failure, to make a unique contribution to our understanding of the complex ecological process of social support (Vaux, 1991).

CONCLUSION

In conclusion, it is clear that there are many questions that need to be answered with regard to the operation of social support before we can determine with reasonable confidence the situations in which such a resource will be optimally effective. Findings obtained in the present study represent a step in the direction towards clarifying this complex process. It is thus recommended that future research take cognisance of the suggestions made in the present study with regard to both theoretical and practical implications, which may help to further elucidate our understanding of this immensely complex environmental resource.

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APPENDIX A

TABLE 1 Previous Measures of Social Support

MEASURE	DESCRIPTION	RELIABILITY	VALIDITY
Perceived Social Support from Family & Friends Scale (PSS-Fa & PSS-Fr) Procidano & Heller (1983).	Consists of 2 20-item scales using a yes/no/don't know format that measure the subjects perceptions of the extent to which family and friends fulfill the individuals need for support, information and feedback. Assesses mainly emotional support.	Test retest = .83 Internal consistency = .88 (PSS-Fr) and .90 (PSS-Fa).	Correlations with measures of psychiatric symptomology, self statements and observed interactions.
The Social Support Questionnaire-SSQ (Sarason, Levine, Basham & Sarason, 1983).	2 Parts: 1) Identifies individuals to whom respondents can turn to for help (Availability) (SSQ-Number) 2) Assesses satisfaction with support received from these individuals (SSQ-satisfaction) (27 items). Assesses mainly emotional support type.	Test retest = .90 for SSQ-N and .83 for SSQ-S Internal consistency = .97 (SSQ-N) and .94 (SSQ-S).	r = -0.22 between SSQ-N and multiple adjective affect checklist (MAACL) and 0.35 between SSQ-N and EPI. r = -0.43 between SSQ-S and MAACL and -0.37 between SSQ-S and EPI (women only).
The Interpersonal Support Evaluation List (ISEL) Cohen, Mermelstein, Karhanik & Hoberman (1985).	40 item Scale that uses a yes/no format (48 items in student questionnaire). 4 subscales: tangible, belonging, esteem and appraisal support. measures perceptions of available support.	Test retest = .71 to .87 student version and .53 to .70 general population version. Internal consistency = .77 to .88 (student version) and .58 to .90 (general population version).	Student version r = 0.46 with ISSB and -0.52 to -.064 with measures of social anxiety. General population version r = -0.52 to -0.60 with measures of psychiatric symptomology and r = -0.19 to -0.39 with physical syptomology.
The Norbeck Social Support Questionnaire (NSSQ) Norbeck, Lindsey & Carrieri (1981).	Respondent lists 20 network members and answers 9 questions on each: 6 - on functional properties of social support 1 - duration of relationships 1 - on frequency 1 - on recent losses	Test retest = 0.85 to 0.92 Internal consistency = 0.69 to 0.98.	Controlled for response bias. Concurrent v = -0.3 to 0.56 with Schaefer et al SSQ.
The Personal Resource Questionnaire (PRQ85) Brandt & Weinert (1985).	2 Separate parts: 1. Information about resources, satisfaction and presence of confidant. 2. 25 item Likert Scale and 5 item Self Help Ideology Scale (SHI) 25 items refer to Perceived level of Social Support.	Cronbach's alpha = .89 for part 2.	Part 1 = 0.21 to 0.23 and part 2 = 0.30 to 0.44 with a measure of family integration. Construct v = -0.25 to -0.14 with SHI.
The Social Support Behaviour Scale (SS-B) Vaux, Riedel & Stewart (1987).	Consists of 45 items designed to tap 5 modes of support: emotional support, socialising, practical assistance, financial assistance and advice/guidance from family and friends.	Internal consistency = 0.90 and 0.93 for family and friend support scales (black sample) and 0.85 and 0.83 for family and friend support (white sample).	-

MEASURE	DESCRIPTION	RELIABILITY	VALIDITY
The Interview Schedule for Social Interaction (Henderson, Vones, Byrne & Scott; 1980).	Based on Weiss's 6 social support provisions - attachment, social integration, opportunity for nurturing others, reassurance of personal wealth, sense of reliable alliance, obtainance of help and guidance. Assesses availability and satisfaction.	Test retest = 0.75 to 0.79 Internal consistency = 0.67 to 0.81.	Based on modest cumulations with Eysenck Personality Inventory and with reports from significant others in the respondents lives.
The Social Relationships Scale (SRS) McFarlane, Neale, Norman, Roy & Streiner (1981).	6 categories of Potential Life Stress. Respondents list individuals with whom they have discussed each area and rate the helpfulness of each individual on a 7 point scale. They also indicate whether the relationship is reciprocal and list whom they would turn to in a crisis.	Test retest = 0.91 for number of individuals; 0.76 for mean helpfulness.	Based on clinicians reports.
The Arizona Social Support Index (SSI) Wilcox (1981).	6 categories: material aid, physical assistance, intimate interaction, guidance feedback, positive social interaction. Also measures total network size which includes size of unconflicted and conflicted network and support satisfaction and support need.	Test retest = 0.88 total network size, 0.54 conflicted network size; 0.69 support satisfaction. Internal consistency = 0.33 for support satisfaction and 0.52 for support need.	r = -0.42 with ISSB (available network size) and r = 0.32 with ISSB (conflicted network size).
The Social Support Index (SSI) Wilcox (1981).	18 items tapping emotional, tangible and informational support (6 items each).	Test retest = 0.89; Internal Consistency = 0.92.	No specific validity data given.
The Social Support Questionnaire (SSQ), Wilcox, (1981).	Asks questions concerning the number of supporters, their relationship to the respondent, proximity and number of voluntary organisations to which the respondent belongs.	Not available	Not available
The Inventory of Social Supportive Behaviours (ISSB) Barerra (1981a).	40 items, respondents rate the frequency with which each item occurred in the preceding month using a five point scale. Measures 4 types of support: emotional, instrumental, informational - appraisal and socialising.	Test retest = 0.93; individual items = 0.44 to 0.91. Internal consistency = 0.93 to 0.94 (first administration to second administration).	Not available
The Supervisory Leadership Scale (Taylor & Bowers, 1972).	Consists of 13 items that measure subordinate perception of leadership effectiveness in terms of support, goal emphasis, work facilitation and interaction facilitation. The three items in support subscale assess emotional support type.	Coefficient alpha = .94 for support subscale.	Four samples correlated with a measure assessing leadership consideration (mean r = .78)

[illegible]	[illegible]	[illegible]	[illegible]
The Satisfaction with Supervision Scale of the Job Description Index (Smith, Kendall & Hulin, 1969).	Supervision scale measures satisfaction with supervision across 18 items scored yes/no/uncertain.	Internal reliability - .51 to .89 (M = .84) Test retest = .77 (seven months) .73 (twelve months) and .46 (sixteen months).	r with personal functioning range = -.20 to -.33 (men) and -.10 to -.15 (working women).
Work Relationship Index (WRI) Billings & Moos (1982).	Consists of 3 components: 1. Involvement, concern with and commitment to job. 2. Peer cohesion - support from co-workers. 3. Support to and from supervisor.	Internal consistency = .88 Test - retest over 12 to 15 months = .58 (men) and .53 (women).	r with personal functioning range = -.07 to -.27 for working men; -.16 to -.44 for working women and -.31 to -.38 for unemployed women.
Family Relationship Index (FRI) Billings & Moos (1982).	Consists of 3 components: 1. Cohesion: the degree to which family members are helpful and supportive of one another. 2. Expressiveness: encouragement for open expression of feelings among family members. 3. Conflict: the extent to which families fight and express anger.	Internal consistency = .69 Test - retest over 12 to 15 months = .62 for men; .64 for employed woman and .69 for unemployed women.	--
The Social Support Inventory (Brown, Brady, Lent & Hall, 1987).	Consists of 39 items assessing 4 types of social support needs: esteem needs, expressive needs and utilitarian needs. Established whether social support has been utilised recently and how satisfied the respondent is with such support.	--	--
The Significant Others Scale (SOS) Power, Champion & Aris (1988). Social Support Questionnaire (SSQ) Schaefer, Coyne & Hazarus (1981).	2 Separate parts: 1. 9 situations measuring tangible support. 2. List of network members and ratings for informational and emotional support.	Test - retest = .56 tangible and .66 emotional. Internal consistency = .81 (informational) .95 (emotional) .21 (tangible).	Not available

APPENDIX B

THE FOUR TYPES OF SOCIAL SUPPORT

The four types of social support, according to House (1981) are as follows:

EMOTIONAL SUPPORT:
which entails the provision of empathy, caring, love and trust. It conveys to the receiver that he/she is cared for, accepted and loved by the provider.

INSTRUMENTAL SUPPORT:
which entails the provision of services that directly help the person in need, e.g. physically helping them do their work, lending them money, etc.

INFORMATIONAL SUPPORT:
which entails the provision of information that can help the recipient solve or cope with a problem that they are experiencing. As opposed to instrumental support, informational support is not in and of itself useful. Rather it helps people to help themselves. Informational support can constitute instrumental support, but only if the person's actual needs is for information, for example, tutoring or coaching.

APPRAISAL SUPPORT:
which also entails the transmission of information. However such information does not imply the affect of emotional support or the aid of instrumental support. Rather, it is relevant to self-comparison - allowing the individual to compare him/herself to others in order to determine how well or poorly he/she is coping/performing.

The following list contains a series of events that describe the relationship between you and your supervisor. Please read each statement and indicate:

1. How often does or would this occur, by placing a tick in the first set of columns

AND

2. How satisfied you are with this, by placing a tick in the second set of columns.

For example:

	How often does or would this occur?					How satisfied are you with this?						
	never	hardly ever	some of the time	most of the time	all of the time	extremely satisfied	very satisfied	moderately satisfied	not sure	moderately dissatisfied	very dissatisfied	extremely dissatisfied
Your supervisor shows that he/she likes you as a person.				✓			✓					

	How often does or would this occur?					How satisfied are you with this?						
	never	hardly ever	some of the time	most of the time	all of the time	extremely satisfied	very satisfied	moderately satisfied	not sure	moderately dissatisfied	very dissatisfied	extremely dissatisfied
1. Your supervisor is friendly and easy to approach.												
2. Your supervisor provides you with all the necessary information to enable you to do a good job.												
3. Your supervisor helps you get your job done when you encounter difficulties.												
4. Your supervisor gives you positive feedback regarding your work.												
5. Your supervisor is interested in what you have to say.												
6. Your supervisor compares you favourably to others at work.												
7. Your supervisor gives you information about future changes at work.												
8. You can turn to your supervisor in times of difficulty.												
9. Your supervisor says things about your work that boost your self-confidence.												
10. Your supervisor helps you get your job done when your workload is too heavy.												
11. Your supervisor shows you how to do something at work.												
12. Your supervisor informs you of choices or opportunities that are available to you.												
13. Your supervisor makes an effort to arrange extra help for you when you are under pressure.												

	How often does or would this occur?					How satisfied are you with this?						
	never	rarely ever	some of the time	most of the time	all of the time	extremely satisfied	very satisfied	moderately satisfied	not sure	moderately dissatisfied	very dissatisfied	extremely dissatisfied
14. Your supervisor is willing to listen to your work-related problems.												
15. You can trust and talk frankly to your supervisor.												
16. Your supervisor is negatively biased in the feedback he/she gives you regarding your work.												
17. Your supervisor tells you who to see for assistance if he/she cannot help you with a problem.												
18. Your supervisor shows you that he/she cares about you as a person.												
19. Your supervisor does NOT give you feedback regarding your performance at work.												
20. Your supervisor tells you in a constructive way when your work needs improvement.												
21. Your supervisor gives you job instructions that are easy to understand.												
22. Your supervisor is willing to listen to your personal problems.												
23. Your supervisor provides you with encouragement when you have to do something difficult.												
24. Your supervisor does NOT tell you how you are doing as regards your work as he/she assumes that you know this.												
25. Your supervisor provides you with reassurance when you experience problems regarding your work.												
26. Your supervisor praises you when you have done something well.												
27. Your supervisor shows respect for you.												
28. Your supervisor helps you to develop new ways of doing things at work.												
29. If you encounter a problem at work your supervisor provides you with information that enables you to solve the problem.												
30. Your supervisor expresses an interest in and concern for your well-being.												
31. Your supervisor stands by you if you get caught up in a difficult situation at work.												
32. Your supervisor withholds information from you regarding your job.												
33. Your supervisor makes you feel that you are an important part of the team/work group.												

APPENDIX C

EMPLOYEE ATTITUDE QUESTIONNAIRE

This questionnaire forms part of an independent research project being conducted by the Division of Industrial Psychology or the School of Psychology at the University of the Witwatersrand.

This study aims to assess how you feel regarding various aspects of your work life. As this is an independent research project your confidentiality is ensured. No persons will have access to your responses and opinions, so please answer each item as accurately as possible. You are not required to state your name anywhere on this questionnaire and so your responses will remain anonymous. On completion of this questionnaire, kindly place it in the attached envelope and drop it in the box provided.

Before filling in the questionnaire, please provide the following information:

Age: _____

Race: _____

Home Language: _____

Educational Standard (e.g. Std. 8, Matric, B. Comm, etc.): _____

_____

Marital Status: _____

Number of children: _____

Name of Organisation where you work: _____

_____

Sex: MALE _____ or FEMALE _____

Grading Level: _____

The following list contains a series of events that describe the relationship between you and your supervisor. Please read each statement and indicate:

1. How often does or would this occur, by placing a tick in the first set of columns

AND

2. How satisfied you are with this, by placing a tick in the second set of columns.

For example:

	How often does or would this occur?					How satisfied are you with this?						
	never	hardly ever	some of the time	most of the time	all of the time	extremely satisfied	very satisfied	moderately satisfied	not sure	moderately dissatisfied	very dissatisfied	extremely dissatisfied
Your supervisor shows that he/she likes you as a person.				✓			✓					

	How often does or would this occur?					How satisfied are you with this?						
	never	hardly ever	some of the time	most of the time	all of the time	extremely satisfied	very satisfied	moderately satisfied	not sure	moderately dissatisfied	very dissatisfied	extremely dissatisfied
1. Your supervisor is friendly and easy to approach.												
2. Your supervisor provides you with all the necessary information to enable you to do a good job.												
3. Your supervisor helps you get your job done when you encounter difficulties.												
4. Your supervisor gives you positive feedback regarding your work.												
5. Your supervisor is interested in what you have to say.												
6. Your supervisor compares you favourably to others at work.												
7. Your supervisor gives you information about future changes at work.												
8. You can turn to your supervisor in times of difficulty.												
9. Your supervisor says things about your work that boost your self-confidence.												
10. Your supervisor helps you get your job done when your workload is too heavy.												
11. Your supervisor shows you how to do something at work.												
12. Your supervisor makes an effort to arrange extra help for you when you are under pressure.												
13. Your supervisor is willing to listen to your work-related problems.												

	How often does or would this occur?					How satisfied are you with this?						
	never	hardly ever	some of the time	most of the time	all of the time	extremely satisfied	very satisfied	moderately satisfied	not sure	moderately dissatisfied	very dissatisfied	extremely dissatisfied
14. You can trust and talk frankly to your supervisor.												
15. Your supervisor is willing to listen to your personal problems.												
16. Your supervisor provides you with encouragement when you have to do something difficult												
17. Your supervisor does NOT tell you how you are doing as regards your work as he/she assumes that you know this.												
18. Your supervisor provides you with reassurance when you experience problems regarding your work.												
19. Your supervisor praises you when you have done something well.												
20. Your supervisor helps you to develop new ways of doing things at work												
21. Your supervisor expresses an interest in and concern for your well-being												
22. Your supervisor stands by you if you get caught up in a difficult situation at work.												
23. Your supervisor withholds information from you regarding your job.												

Please answer the following questions regarding the previous twenty-three items that you have just completed:

1. Where there any questions that you did not understand?

   YES ☐ NO ☐

   If yes, please list which one/s and explain what you did not understand about them.

2. Where there any items that you thought were ambiguous?

   YES ☐ NO ☐

   If so, which items where they and explain why you found them to be ambiguous.

3. Are there any aspects of your relationship with your supervisor/boss that you feel were not included amongst the previous items?

   YES ☐ NO ☐

   If yes, what aspects are they? Describe.

4. Did you find any items to be of a sensitive/offensive nature?

   YES ☐ NO ☐

   If yes, which items were they and why did you find them to be sensitive or offensive?

5. Are there any items that you felt were inappropriate and should not therefore have been included in the list?

   YES ☐ NO ☐

   If yes, which items were they and why do you feel they should not have been included?

APPENDIX D

* The headings for each scale were not included in the questionnaire distributed to subjects.

EMPLOYEE ATTITUDE QUESTIONNAIRE

This questionnaire forms part of an independent research project being conducted by the Division of Industrial Psychology of the School of Psychology at the University of the Witwatersrand.

This study aims to assess how you feel regarding various aspects of your work life. As this is an independent research project your confidentiality is ensured. No persons will have access to your responses and opinions, so please answer each item as accurately as possible. You are not required to state your name anywhere on this questionnaire and so your responses will remain anonymous. On completion of this questionnaire, kindly place it in the attached envelope and drop it in the box provided.

Before filling in the questionnaire, please provide the following information:

Age: _____

Race: _____

Home Language: _____

Educational Standard (e.g. Std. 8, Matric, B. Comm, etc.): _____

_____

Marital Status: _____

Number of children: _____

Name of Organisation where you work: _____

_____

Sex: MALE _____ or FEMALE _____

Grading Level: _____

The following list contains a series of events that describe the relationship between you and your supervisor. Please read each statement and indicate:

1. How often does or would this occur, by placing a tick in the first set of columns

AND

2. How satisfied you are with this, by placing a tick in the second set of columns.

For example:

	How often does or would this occur?					How satisfied are you with this?						
	never	hardly ever	some of the time	most of the time	all of the time	extremely satisfied	very satisfied	moderately satisfied	not sure	moderately dissatisfied	very dissatisfied	extremely dissatisfied
Your supervisor shows that he/she likes you as a person.												

	How often does or would this occur?					How satisfied are you with this?						
	never	hardly ever	some of the time	most of the time	all of the time	extremely satisfied	very satisfied	moderately satisfied	not sure	moderately dissatisfied	very dissatisfied	extremely dissatisfied
1. Your supervisor is friendly and easy to approach.												
2. Your supervisor provides you with all the necessary information to enable you to do a good job.												
3. Your supervisor helps you get your job done when you encounter difficulties.												
4. Your supervisor gives you positive feedback regarding your work.												
5. Your supervisor is interested in what you have to say.												
6. Your supervisor compares you favourably to others at work.												
7. Your supervisor gives you information about future changes at work.												
8. You can turn to your supervisor in times of difficulty.												
9. Your supervisor says things about your work that boost your self-confidence.												
10. Your supervisor helps you get your job done when your workload is too heavy.												
11. Your supervisor shows you how to do something at work.												
12. Your supervisor makes an effort to arrange extra help for you when you are under pressure.												
13. Your supervisor is willing to listen to your work-related problems.												

	How often does or would this occur?					How satisfied are you with this?						
	never	hardly ever	some of the time	most of the time	all of the time	extremely satisfied	very satisfied	moderately satisfied	not sure	moderately dissatisfied	very dissatisfied	extremely dissatisfied
14. You can trust and talk frankly to your supervisor.												
15. Your supervisor is willing to listen to your personal problems.												
16. Your supervisor provides you with encouragement when you have to do something difficult.												
17. Your supervisor does NOT tell you how you are doing as regards your work as he/she assumes that you know this.												
18. Your supervisor provides you with reassurance when you experience problems regarding your work.												
19. Your supervisor praises you when you have done something well.												
20. Your supervisor helps you to develop new ways of doing things at work.												
21. Your supervisor expresses an interest in and concern for your well-being.												
22. Your supervisor stands by you if you get caught up in a difficult situation at work.												
23. Your supervisor withholds information from you regarding your job.												

* **The Supervisor Social Support Scale (Taylor & Bowers, 1972)**

The following questions refer to your supervisor for whom you work. Please indicate how you feel by ticking the appropriate column for each item.

To what extent is your supervisor:

	To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent
1. Friendly and easy to approach.					
2. Attentive to what you have to say.					
3. Willing to listen to your work related problems.					

* **The Supervison Scale of the Job Description Index (Smith, Kendall & Hulin, 1969).**

The following items are about the supervision you receive in your present job. Please answer YES (Y), UNSURE (?) or NO (N) by ticking either the Y, ? or N next to each item below.

My supervisor:

1. Asks my advice	Y	?	N
2. Is hard to please	Y	?	N
3. Is impolite	Y	?	N
4 Praises good work	Y	?	N
5. Is tactful	Y	?	N
6. Is influential	Y	?	N
7. Is up-to-date	Y	?	N
8. Doesn't supervise enough	Y	?	N
9. Is quick tempered	Y	?	N
10. Tells me where I stand	Y	?	N
11. Is annoying	Y	?	N
12. Is stubborn	Y	?	N
13. Knows the job well	Y	?	N
14. Is bad	Y	?	N
15. Is intelligent	Y	?	N
16. Leaves me on my own	Y	?	N
17. Is around when needed	Y	?	N
18 Is lazy	Y	?	N

APPENDIX E

*The headings for each scale were not included in the questionnaire distributed to subjects.

EMPLOYEE ATTITUDE QUESTIONNAIRE

This questionnaire forms part of an independent research project being conducted by the Division of Industrial Psychology of the School of Psychology at the University of the Witwatersrand.

This study aims to assess how you feel regarding various aspects of your work life. As this is an independent research project your confidentiality is ensured. No persons will have access to your responses and opinions, so please answer each item as accurately as possible. You are not required to state your name anywhere on this questionnaire and so your responses will remain anonymous. On completion of this questionnaire, kindly place it in the attached envelope and drop it in the box provided.

Before filling in the questionnaire, please provide the following information:

Age: _____

Race: _____

Home Language: _____

Educational Standard (e.g. Std. 8, Matric, B. Comm, etc.): _____

_____

Marital Status: _____

Number of children: _____

Name of Organisation where you work: _____

_____

Sex: MALE _____ or FEMALE _____

Grading Level: _____

The following list contains a series of events that describe the relationship between you and your supervisor. Please read each statement and indicate how often does or would this occur, by placing a tick in the relevant column.

For example:

	How often does or would this occur?				
	never	hardly ever	some of the time	most of the time	all of the time
Your supervisor shows that he/she likes you as a person.				✓	

	How often does or would this occur?				
	never	hardly ever	some of the time	most of the time	all of the time
1. Your supervisor is friendly and easy to approach.					
2. Your supervisor provides you with all the necessary information to enable you to do a good job.					
3. Your supervisor helps you get your job done when you encounter difficulties.					
4. Your supervisor gives you positive feedback regarding your work.					
5. Your supervisor is interested in what you have to say.					
6. Your supervisor gives you information about future changes at work.					
7. You can turn to your supervisor in times of difficulty.					
8. Your supervisor says things about your work that boost your self-confidence.					
9. Your supervisor helps you get your job done when your workload is too heavy.					
10. Your supervisor shows you how to do something at work.					
11. Your supervisor makes an effort to arrange extra help for you when you are under pressure.					
12. Your supervisor is willing to listen to your work-related problems.					
13. You can trust and talk frankly to your supervisor.					
14. Your supervisor is willing to listen to your personal problems.					
15. Your supervisor provides you with encouragement when you have to do something difficult.					
16. Your supervisor does NOT tell you how you are doing as regards your work as he/she assumes that you know this.					
17. Your supervisor provides you with reassurance when you experience problems regarding your work.					

	How often does or would this occur?				
	never	hardly ever	some of the time	most of the time	all of the time
18. Your supervisor praises you when you have done something well.					
19. Your supervisor helps you to develop new ways of doing things at work.					
20. Your supervisor expresses an interest in and concern for your well-being.					
21. Your supervisor stands by you if you get caught up in a difficult situation at work.					
22. Your supervisor withholds information from you regarding your job.					

The following items question various aspects of your job. Please place a cross (✗) under the column which best describes your answer.

* The Role Ambiguity Scale (Rizzo, House & Lirtzman, 1970).

	FALSE	UNSURE	TRUE
1. I feel certain about how much authority I have.			
2. Clear planned goals and objectives exist for my job.			
3. I know that I have divided my time properly.			
4. I know what my responsibilities are.			
5. I know exactly what is expected of me.			
6. Explanation is clear of what has to be done.			

* The Role Conflict Scale (Rizzo, House & Lirtzman, 1970).

	FALSE	UNSURE	TRUE
1. I have to do things that should be done differently.			
2. I receive an assignment without the manpower to complete it.			
3. I have to go against a rule or policy in order to carry out an assignment.			
4. I work with two or more groups that operate quite differently.			
5. I receive incompatible requests from two or more people.			
6. I do things that are likely to be accepted by one person and not accepted by others.			
7. I receive an assignment without adequate resources and materials to execute it.			
8. I work on unnecessary things.			

* The Propensity to Leave Scale (Lyons, 1971).

	1 YEAR	2 YEARS	3 YEARS	5 YEARS	10 YEARS	MORE THAN 10 YEARS
1. How long would you like to continue working in your present job?						

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

* The Subjective Quantitative Work Load Scale (Caplan, [illegible]).

The following items are formulated to assess various work [illegible]ects of your job. Please cross (✗) the appropriate column for each item.

	very little (1)	little (2)	some (3)	great (4)	very great (5)
1. The number of projects and/or assignments you have is ...					
2. The amount of time you spend in meetings is ...					
3. The amount of time you have is ...					
4. The number of conflicting demands you have is ...					
5. The work load, the amount of things that need to be done is ...					
6. The time to think and contemplate is ...					
7. The quantity of work you are expected to do is ...					
8. The extent to which you feel you never have any time is ...					
9. The number of phone calls and office visits you have during the day is ...					

*** The Self-Esteem at Work Scale (Quinn & Shepard, 1974).**

The following words and phrases ask you how you see yourself in your work. For example, in answer to question number 1, if you think you are very successful in your work, put a mark in the box right next to the word "Successful". If you think you are not at all successful in your work, put a mark in the box right next to the words "Not Successful". If you think you are somewhere in between, put a cross where you think it belongs. PLEASE MAKE SURE THAT YOU ANSWER ALL FOUR QUESTIONS BELOW.

1. Successful								Not Successful
2. Important								Not Important
3. Doing my best								Not doing my best
4. Happy								Not Happy

*** The General Health Questionnaire (Goldberg, 1972).**

Please mark with a cross (X) the response which best suits the way that you have felt, thought and behaved in the past few weeks.

Have you recently ...

	better than usual (1)	same as usual (2)	worse than usual (3)	much worse than usual (4)
1. been able to concentrate on whatever you're doing?				

	not at all (1)	no more than usual (2)	rather more than usual (3)	much worse than usual (4)
2. lost much sleep over worry?				

	more so than usual (1)	same as usual (2)	less useful than usual (3)	much less useful (4)
3. felt that you are playing a useful part in things?				

	more so than usual (1)	same as usual (2)	less so than usual (3)	much less capable (4)
4. felt capable of making decisions about things?				

	not at all (1)	no more than usual (2)	rather more than usual (3)	much more than usual (4)
5. felt constantly under strain?				

	not at all (1)	no more than usual (2)	less able than usual (3)	much less able than usual (4)
6. felt that you could not overcome your difficulties?				

	more so than usual (1)	same as usual (2)	less so than usual (3)	much less than usual (4)
7. been able to enjoy your normal day-to-day activities?				

	more so than usual (1)	same as usual (2)	less able than usual (3)	much less able (4)
8. been able to face up to your problems?				

	not at all (1)	no more than usual (2)	rather more than usual (3)	much worse than usual (4)
9. been feeling unhappy and depressed?				

	not at all (1)	no more than usual (2)	rather more than usual (3)	much worse than usual (4)
10. been losing confidence in yourself?				

	not at all (1)	no more than usual (2)	rather more than usual (3)	much worse than usual (4)
11. been thinking of yourself as a worthless person?				

	more so than usual (1)	about the same as usual (2)	less so than usual (3)	much less than usual (4)
12. been feeling reasonably happy, all things considered?				

* **The Overall Job Satisfaction Scale (Warr, Cook and Wall, 1979).**

How satisfied are you with the following aspects of your job? Please place a cross (✗) in the appropriate box.

	extremely dissatisfied (1)	very dissatisfied (2)	slightly dissatisfied (3)	neutral (4)	slightly satisfied (5)	very satisfied (6)	extremely satisfied (7)
1. The physical work conditions.							
2. The freedom to choose your own method of working.							
3. Your fellow workers.							
4. The recognition you get for good work.							
5. Your immediate boss.							
6. The amount of responsibility you are given.							
7. Your rate of pay.							
8. Your opportunity to use your abilities.							
9. Industrial relations between management and workers in your firm.							
10. Your chance of promotion.							
11. The way your firm is managed.							
12. The attention paid to suggestions you make.							
13. Your hours of work.							
14. The amount of variety in your job.							
15. Your job security.							
16. Taking everything into consideration, how do you feel about your job as a whole?							

APPENDIX F

TABLE 1 **Test of Linearity of Relationship between Emotional Supervisor Social Support and the Dependent Variables.**

Dependent Variable	Eta^2	R^2	F-value	df
Self-Esteem	0.431	0.442	-0.87ns	5/275
Psychological Well Being	0.231	0.237	-0.36ns	6/279
Job Satisfaction	0.548	0.560	-1.07ns	6/276
Propensity to Leave	0.453	0.466	-1.07ns	6/277

TABLE 2 **Test of Linearity of Relationship between Instrumental Supervisor Social Support and the Dependent Variables.**

Dependent Variable	Eta^2	R^2	F-value	df
Psychological Well Being	0.032	0.059	-1.01ns	2/278
Job Satisfaction	0.145	0.195	-7.72ns	2/265
Propensity to Leave	0.122	0.162	-6.37ns	2/278

TABLE 3 **Test of Linearity of Relationship between Appraisal Supervisor Social Support and the Dependent Variables.**

Dependent Variable	Eta^2	R^2	F-value	df
Self-Esteem	0.276	0.278	0.33ns	2/282
Psychological Well Being	0.149	0.137	1.94ns	2/278

TABLE 4 **Test of Linearity of Relationship between Role Ambiguity and the Dependent Variables.**

Dependent Variable	Eta^2	R^2	F-value	df
Self-Esteem	0.315	0.321	-0.73ns	3/279
Psychological Well Being	0.239	0.238	0.62ns	3/280
Job Satisfaction	0.325	0.319	0.82ns	3/264
Propensity to Leave	0.258	0.245	1.57ns	3/277

TABLE 5 Test of Linearity of Relationship between Informational Supervisor Social Support and the Dependent Variables.

Dependent Variable	R^2	R^2	F-ratio	df
Job Satisfaction	0.045	0.059	-4.0ns	1/268
Propensity to Leave	0.037	0.059	-6.3ns	1/279

TABLE 6 Test of Linearity of Relationship between Role Conflict and the Dependent Variables.

Dependent Variable	R^2	R^2	F-ratio	df
Self-Esteem	0.126	0.103	1.45ns	5/277
Psychological Well Being	0.150	0.130	1.31ns	5/275
Job Satisfaction	0.186	0.159	1.74ns	5/262
Propensity to Leave	0.158	0.145	0.93ns	5/277

TABLE 7 Test of Linearity of Relationship between Role Overload and the Dependent Variables.

Dependent Variable	R^2	R^2	F-ratio	df
Psychological Well Being	0.035	0.022	0.93ns	4/276
Job Satisfaction	0.015	0.001	0.96ns	4/263
Propensity to Leave	0.019	0.001	1.24ns	4/259

Author: Bernstein Colleen.
Name of thesis: Supervisor Social Support As A Moderator Of Stress-strain Relationships.

PUBLISHER:
University of the Witwatersrand, Johannesburg
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