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Holcombe, Forrest Douglas

AN INVESTIGATION OF THE DETERMINANTS OF MANAGERIAL COPING RESPONSE IN STRESSFUL WORK SITUATIONS

The Ohio State University

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An Investigation of the Determinants of Managerial 
Coping Response in Stressful Work Situations 

Dissertation 

Presented in Partial Fulfillment of the Requirements for 
the Degree Doctor of Philosophy in the Graduate 
School of The Ohio State University 

by 

Forrest Douglas Holcombe, B.S., M.B.A. 

* * * * * 

The Ohio State University 

1982 

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To my Wife, Karen Annette Holcombe

To my Children, Kristen Annette and Jeremy Douglas

And to my Parents, Forrest and Dorothy Holcombe
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Along my lengthy academic journey I have truly been more fortunate than most, having rubbed elbows and minds with a fascinating array of human beings. Six years ago I strolled into the office of Professor Chuck Behling; since that event to say that my life hasn't been the same would be unforgivable understatement. Three years ago Chuck gave me the opportunity to work with him as a full partner in research. His confidence in me, his devotion to my professional development, and his service as superior example have provided me with far more than mere superlatives could capture. Working with Chuck has formed the very cornerstone of my intellectual enterprise.

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It is fitting to acknowledge the sacrifices made by one's family when one becomes doctorally inclined. I hope that the future will, in some way, offer compensation where it is so truly deserved. Until then, Karen, Kris, and Jerry, I can only reaffirm my love and devotion to you.
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Chapter 1

INTRODUCTION

The Importance of Studying Stress

Human stress, particularly stress associated with work, has become a focal point for research on behavior in organizations. One recent overview of the literature on job stress cites more than 600 books and articles, 85 percent of which were published since 1970 (Brief, Schuler and Van Sell, 1981). The topical bibliography of this book sorts over 400 references into 80 categories (Chapter 8), many of which represent major research areas. Researchers in a wide range of fields are studying human stress.

Three reasons may account for the increased interest in work stress within the domain of organizational behavior. First, there is evidence that stress is a significant cost to American business firms. One estimate places the cost of ulcers and coronary disease, often the physical results of prolonged stress, at more than $45 billion in a single year (Schuler, 1980). Absenteeism, turnover, work stoppages, and waste may sometimes be due ultimately to stress. As an influence on behavior and performance, then, stress has gained the attention of manager and researcher alike.

A second reason for the prominence of research on job stress is its significance in determining the overall quality of working life.
(QWL). "A major determinant of the 'quality of working life'" (Brief et al., 1981, p. 12-13), job stress directly affects experienced work satisfaction. Accordingly, managers and behavioral scientists have become increasingly interested in environmental conditions and job design factors experienced by people at work (Szilagyi and Wallace, 1980). Although the accompanying public awakening in response to these developing social responsibility issues dates back only a decade or so (Luthans, Hodgetts and Thompson, 1980), interest in this area has mushroomed and has given rise to major research programs (Davis and Cherus, 1975; Hackman and Suttle, 1977). The Williams-Steiger Occupational Health and Safety Act of 1970 serves as a landmark of a new era of governmental commitment to more humane work environments (Steiger, 1977), signalling wide social legitimacy is attached to these issues.

Third, the study of stress provides a forum for the integration of macro- and micro-organizational behavior theory. Viewed as a problematic outcome of the relationship between the individual and the organization, stress as a phenomenon includes variables important at both levels of analysis (French, Rodgers and Cobb, 1974; McGrath, 1976). For example, it is likely that knowledge about job stress and how individuals cope with it will facilitate explanations of how important individual and organizational outcomes are related. The health and well-being of the employee and the enterprise are jointly at stake.

As a research area, then, the study of job stress may reveal ways to improve worker performance and efficiency, improve the quality of working life, and provide a rubric useful for needed theoretical integration of the organizational behavior field.
Description of the Stress Process

Definitions and descriptions of stress take one or the other of two forms: chronic or acute. Stress viewed as some degree of mismatch between an individual's needs and abilities and his or her perception of the demands, constraints, or opportunities presented by the work environment may be termed chronic stress. Role conflict and role ambiguity (Kahn, Wolfe, Quinn, Snoek and Rosenthal, 1964) and the more recent notion of person-environment fit (McGrath, 1976; Beehr and Newman, 1978; French et al., 1974) are examples of this view of the nature of stress.

Chronic stress may be the result of a prolonged sequence of two-way interactions in which the individual and the environment influence and attempt to adapt to each other, but never achieve a smooth match. Chronic stress may result from individual factors, situation factors, or a combination of both. Some individuals seemingly develop a preference for some degree of mismatch. They adopt a harried lifestyle which involves a continuous struggle with demands and opportunities. Such persons prolong the mismatch even while they continue to function adequately in their jobs. On the other hand, the complexity and instability of the environment an individual faces may produce a degree of uncertainty leading to frequent person-environmental mismatch.

Chronic stress is distinguishable from acute stress, in terms of duration and also in that emphasis is placed on the interaction of the environment and the individual within a specific situation. Acute stress results from the experience or threat of person-environment mismatch in instances where a specific interaction is in process.
Such instances occur in what has been termed behavior settings (McGrath, 1976), which are regularly occurring constellations of stimuli faced by the individual. The encounter with such a setting and the reaction to it gives the concept of acute stress an episodic character. An acute stress episode lasts only as long as the individual continues to respond to the specific setting or event taking place. Residual effects may linger as chronic stress, which then is seen as an accumulation of acute stress episodes manifested over time periods covering many different situations.

Acute stress and chronic stress may be treated separately for research purposes, although the two forms are neither independent in etiology nor distinguishable in their effect on the individual. Acute stress is merely a convenient sized parcel of stress phenomena thought to contain the essential features of the construct. This study concerns acute stress, making use of this convenience, and employs the description of specific situations or episodes as the basis for analysis. The interaction of person and environment within particular situations forms the focus of this study.

Acute stress involves three stages which form a stress episode (Behling and Holcombe, 1981). In acute stress episodes emphasis is placed on the role of cognition as a major determinant of the degree of experienced stress and the self's ability to respond. Differences in response patterns, based on the way the individual attempts to handle the stress, are also emphasized. The stages and the hypothesized relationships among the major variables are modeled in Figure 1. Note
that acute stress episodes involve a single, directional, interaction: the individual perceives and interprets the objective situation and then responds to his/her cognitive analysis of the situation.

Objective Situation

The actual set of circumstances faced by an individual at a particular point in time, termed the "objective situation," has been discussed under different labels by several writers, each contributing to the present conceptualization. McGrath (1976) has called this the socio-physical condition and specified it as the intersection of three major components: task, role and behavior setting. Behavior setting may also refer to the entire situation, interpreted as the physical setting with accompanying social patterns (Barker and Wright, 1955).
Beehr (1976) has identified certain "situational moderators": group cohesiveness, supervisor support, and autonomy, which are distinguished from various personality moderators of the relationship between role stress and individual "strain." Situational moderators may be treated as elements of the objective situation, included with the behavior setting. Indeed, basic to the concept of the objective situation as defined here are all interpersonal matters of fact. Personality moderators operate with other individual characteristics. House (1974) grouped situational and individual factors together as "conditioning variables," but allowed that these factors come into play at different points in the occurrence of a stress event.

In addition to the task, role, and behavior setting components, French et al. (1974) were careful to include current individual needs in their person-environment fit paradigm. Changes in need strength or type of need could account for instances where response patterns differ in the presence of identical socio-physical settings and over time. Weick (1970) emphasized that researchers should take account of the ongoing activity when looking at stress responses. More than the concept of task, the ongoing activity is the set of all stimuli that a person is responding to at a given point in time.

Here, in addition to elements of the physical setting, task, and social setting, the objective situation is defined to include actual levels of personal requirements, or needs, and environmental supplies appropriate to the satisfaction of those needs. For example, an individual's need for feedback is included within the construct along with opportunities for knowing results that actually exist in the
organizational setting. Those stimuli attended to by the focal person as well as stimuli potentially involved within the ongoing pattern of events constitute the objective situation.

Subjective Situation

The subjective situation is the internalized, interpreted version of the objective situation. This perception of the situation (Levine and Scotch, 1970) has been referred to by a number of different labels, often depending on the kind of analysis—for example, whether interpersonal or intrapersonal—that is being conducted. An early major study talked of stress in terms of role conflict and ambiguity (Kahn et al., 1964). Sieber (1974) and Goode (1960) spoke of role strain and overload.

On a more individual level, McGrath (1976) speaks of demand-ability matching in terms of person-environment fit (also see Beehr and Newman, 1978), while French et al. (1974) refer to the threat of mismatch for both a demand-abilities and a supplies-needs segment of the developing situation. Burrows, Cox and Simpson (1977) label this factor the cognitive assessment of demands that are placed on the individual. Margolis, Kroes and Quinn (1974) refer to the situational characteristic of homeostatic disruption, again addressing the abnormal demand nature of the perceived state of affairs.

Lazarus (1966) expands this factor, and concomitantly the definition of stress, to include constraints on behavior as well as opportunities for important positive outcomes. Consistent with McGrath (1976), this position is supported by Selye's (1978) recent emphasis on eustress—stress interpreted as primarily a positive phenomenon.
In sum, the subjective situation is defined herein as the perceived behavioral situation to which the individual actually responds. It is important to note that some combination of personality variables and other behavioral predispositions have operated on the subjective situation, resulting in a condition of stress. Stress is present as a pattern of perceptions indicating that some felt discrepancy is occurring. Stress continues as long as such a discrepancy is perceived. The dissipation of stress is dependent on redefinition or reappraisal of the situation (Lazarus, Kanner and Folkman, 1980), which is essentially the evolution of a changed perceptual pattern.

Stress as a Perceptual Phenomenon

While some definitions of stress define it in terms of the objective situation and others see stress as the response to situations, stress is conceptualized here as a cognitive phenomenon, defined in terms of the subjective situation. A person's interpretation of threat, constraint, or opportunity, termed primary appraisal (Lazarus, 1966; Lazarus et al., 1980), is essentially a cognitive evaluation of the situation in terms of its meaning for that person at that point in time. Secondary appraisal involves the evaluation of response options available within the context of the situation (Lazarus, 1966; Folkman and Lazarus, 1980). Reappraisal is a change in the evaluation of the situation—subjective situation—resulting from responses aimed at either the objective situation or the subjective situation. Emphasis on the cognitive processes involved in the context of specific episodes of acute stress positions the effort of this study.
Coping Responses

Two types of coping responses exist in the acute stress episode model: objective and subjective (Figure 1). This dichotomy is well represented in the literature. House (1974) distinguishes between responses serving primarily to alter the perception of the situation—termed defenses—and responses seeking to alter the objective nature of the situation—termed coping (cf. Lazarus, 1966; French et al., 1974). Lazarus and his associates (Lazarus et al., 1980; Folkman and Lazarus, 1980) now refer to emotion-focused and problem-focused coping, respectively, pointing to the function of the response more directly. Coping refers to the entire repertoire of responses an individual may employ for the purpose of reducing or adapting to stress.

In Figure 1, the responses have been labeled objective coping response and subjective coping response to emphasize the roles they play in stress episodes. Selye (1973) has proposed that there are two types of homeostatic reaction in response to stress events. Syntoxic reactions are those of "passive tolerance" (p. 697), in which internal adjustment attempts to achieve a renewed condition of stability. The internal adjustments may include autonomic nervous activity, perceptual distortion, stimuli avoidance, or other measures aimed at disruption of the primary appraisal. These are examples of subjective coping response. Catatonic reactions, "active attack" on the stimuli, comprise behavioral responses aimed at adjusting the situation to the individual. This is the objective coping response. The selection of the objective or subjective coping response alternative as a result of the process of secondary appraisal was of prime significance in this study.
Research on Stress: Knowns and Unknowns

Research on stress has yielded findings in three major areas: antecedents, consequences and intervention techniques. Organizational characteristics such as size and formality, job demands, working conditions, role conflicts and individual characteristics such as Type A behavior pattern are listed as sources of job stress (Brief et al., 1981). Much is known about physiological outcomes of stress, particularly about coronary heart disease and related illnesses, while psychological and behavioral outcomes are less well documented. Techniques of intervention such as relaxation, biofeedback, and meditation have been offered as nonspecific treatments for persons under stress. And while some success in moderating the harmful outcomes of stressful situations has been achieved, the theoretical integration of these activities in the literature on stress is incomplete.

How people cope with stress, specifically how they respond and what determines how they respond, is an essential question related to this third area of inquiry. Roskies and Lazarus (1980), in summarizing the theory of coping, state that how people cope with stress is probably more important than the frequency and severity of the stress episodes themselves. Despite that observation and a great deal of research on coping, "we know relatively little of the nature and substance of people's coping repertoires" (Pearlin and Schooler, 1978, p. 2).

In research on coping, more questions have been raised than answered. Pearlin and Schooler (1978) concluded that known coping mechanisms are generally ineffective in the area of work. People seem to control stress on the job "by keeping work itself in a place secondary
in importance" (p. 10-11). They were not able to determine if behavioral responses or personal resources were clearly more representative of coping attempts subsequently interpreted as successful.

It is well established that coping may involve such processes as repression, anxiety, hostility, aggression, attitude modification, withdrawal, and so on, but little is known about the selection process. Researchers agree on the existence of two fundamental patterns of coping response, objectively oriented and subjectively oriented, differing in terms of which side of the person-environment fit becomes the target of change attempts. Folkman and Lazarus (1980) found that coping patterns were not primarily determined by either individual or situation factors. They did not employ intraindividual characteristics in their analysis, however; they looked at who was involved, how the event was appraised, the context of the situation, and the subject's age and gender.

In summary, it appears that a large gap in research on stress exists in the area of coping responses: How do individuals come to take specific actions in response to stressful situations? If two fundamental patterns of coping response exist, what factors explain the selection of one over the other? Several years ago this gap was identified as a "relative absence of research and theory giving due weight to response and situational variables as sources of variance in coping behaviors" (Lazarus, Averill and Opton, 1974, p. 271). Thus it is unclear to what extent variations in coping response behaviors are due to situational factors as opposed to individual characteristics. Are coping response patterns primarily situation determined or individual determined?
Emphasis of This Study

This investigation addressed the gap identified above by attempting to generate new knowledge about the coping process through a consideration of variables associated with the selection of coping response modes. Single situations—stress episodes—were used to isolate single instances of coping response. In this way, the particular mode of coping was systematically related to the person and to the situation variables defining the episode.

This study of acute stress episodes explored three main factors: individual variables thought to be related to the selection of coping response, situation variables also thought to be so related, and the identification of the coping responses themselves. Relationships among these factors were studied within the context of work settings. The main interest here was how people respond to stress on the job.

Individual Variables

The main variable of interest in this study was control as a determinant of coping response. Control is conceptualized as influence related to the occurrence of events as outcomes of behavioral situations. Control refers to a family of variables describing attributes of the individual as well as attributes of the situation. As an individual variable, or set of variables, the conceptualization of control parallels that of attitude, with a cognitive component, an eva­luative component, and a behavioral component (Hammer and Organ, 1978). The cognitive component of control is an individual's belief in his/her capacity to influence or cause certain outcomes to obtain. The evaluative component refers to the degree to which an individual desires to
possess such capacity. The behavioral component represents the determinant of the extent to which a person is predisposed to take action in response to a stressful situation. It was hypothesized that these factors are related to the type of coping response exhibited in job stress situations.

Situational Variables

Two situational variables may affect the makeup of a coping response pattern. Here again the concept of control was employed as an organizing variable. The events in some situations are subject to influence more than in other situations, regardless of the dispositions of individual actors involved. As a situational variable, this property may be termed controllability (Gatchel, 1980). Thus, a situation exhibits a high amount of controllability to the extent that outcomes are subject to the influence of the individuals involved.

The second situational variable was the severity of job stress episode encountered. Severity is roughly equivalent to importance or significance. Not to be confused with the degree of experienced stress, severity is an index of the significance of a particular situation. One would expect a high correlation between this measure and subjective degree of experienced stress.

Coping Responses

Variability in the selection of objective-oriented and subjective-oriented responses was at the center of concern in this study. Substantiating this variability using reports of work stress episodes and then exploring the factors contributing to this variability summarizes the intent of this research.
Stress

Stress begins with the results of a perceptual process: an appraisal of the environment, job situation, and social situation (Lazarus, 1966; Levine and Scotch, 1970; McGrath, 1976). The result of this appraisal has been termed the subjective situation (see Figure 1). Stress is present as a cognitively determined discrepancy in such a pattern of perceptions. The specific nature of this discrepancy is a matter of interpretation.

Sells (1970, in Averill, 1973) interprets the discrepancy in terms of a demand for response with no response available, under conditions where the consequences of not responding are significant to the individual. Mandler (1966, in Averill, 1973) interprets it to be an interruption of organized response sequences. Similarly, Margolis et al. (1974) refer to homeostatic disruption between a smooth flow of responses in accord with the demands of the situation.

This latter sense, homeostatic disruption, served as the definition of stress for the purposes of this investigation. Acute stress is a felt discrepancy between the demands of a particular situation and the responses an individual perceives he/she has access to in meeting those
demands, under conditions where meeting those demands is important to the individual. The locus of that discrepancy is within the subjective situation.

Acute Job Stress

People experience stress in a variety of situations. One study classified situational factors as being related to health, work, family matters, or unclassified (Folkman and Lazarus, 1980). In this study, only situations involving work-related activities were used. Because the nature of specific types of coping responses to specific stressful work situations is the focus, this study made use of the concept of acute job stress.

Many types of stress situations on the job are anticipated to be repetitive, even occurring on a regular basis. In such cases findings pertaining to acute stress may not be meaningfully different from those that would apply to the concept of chronic stress. The feasibility of such generalizations is beyond the scope of this research but may not be problematical, since the distinction between the two is somewhat artificial. Acute stress as a concept is primarily a methodological tool which facilitates the exploration of the relationships among variables within specific situations.

Even so, people do organize their responses around particular aspects of the immediate situations they face. To isolate the smallest meaningful units of such situations in attempting to analyze the relationships between coping responses and the stimulus antecedents of such responses should prove to be worthwhile. The real limits of acute stress are based on the cognitive orientations of individuals asked to
recall "short descriptions of job-related incidents they had encountered which had generated stress" (Behling, Holcombe and Milburn, 1980, p. 8). Acute job stress, then, applies to the stress episode descriptions as reported.

Coping

Coping is defined as physiological, psychological, and behavioral responses to stress, aimed at reducing or eliminating the perceived felt discrepancy. Coping responses accomplish this by adjusting either the objective situation or the subjective situation or both.

While the definition of stress emphasizes the pattern of perceptions resulting in a cognitively determined discrepancy, coping responses also occur in patterns. The feature that distinguishes one pattern from the other within a particular stress episode is the target of the response. Coping responses attempt to change, or affect, either the objective situation or the subjective situation in order to remove or reduce the felt discrepancy (see Figure 1). Reduction or elimination of stress is therefore the universal motive of coping responses. This does not preclude the possibility of an individual not attempting to reduce stress, nor does it eliminate other types of responses to the stimulus of stressful situations. Coping responses are merely a class of responses with a specific purpose.

Several writers define coping similarly. Folkman and Lazarus (1980) define coping as cognitive and behavioral efforts made to master, tolerate, or reduce external and internal demands and conflicts among them. Referring to the ultimate purpose of coping, Pearlin and
Schooler (1978) define it as behavior that protects people from being psychologically harmed by problematic experience.

Two patterns of coping are recognized in the literature. Attempting to alter the objective situation has been termed problem-oriented coping (Folkman and Lazarus, 1980), vigilance (Lazarus, 1966), cata­toxic reaction (Selye, 1973), and coping response to modify the situation (Pearlin and Schooler, 1978). Attempting to change the subjective situation is called, respectively, emotion-oriented coping, avoidance, syntoxic reaction, and coping response to control the meaning of the problem. Other studies provide a distinction of the type of activity involved in coping behavior by contrasting intrapsychic response from those responses involving direct action (Lazarus, Averill and Opton, 1974; Lazarus et al., 1980). These definitions seem to follow the objectively-oriented or subjectively-oriented pattern of coping.

The action of coping responses upon either the objective or subjective situation is termed reappraisal (Lazarus et al., 1980). Although reappraisal is essentially a cognitive process, it is shown here undifferentiated from coping response activity. In Figure 1, two paths show reappraisal as linkages from each of the coping responses back toward either the objective or the subjective situation. The path back to the objective situation continues to the subjective situation, where stress is experienced, and the reassessment takes place. Changes in the objective situation due to direct action change, in turn, the subjective situation. Stress is reduced or eliminated as the perceived felt discrepancy lessens.

The other path goes directly to the subjective situation. Operating upon internal factors, such coping responses influence the
perceptual processes directly so that stress as experienced is reduced or eliminated. Either path may be effective, depending on the nature of the situation and the nature of the individual.

Stress Episode Reports

In this study descriptions of actual stressful situations furnished by practicing managers were used. In addition to the property of being an authentic, experienced situation, a stress episode report served as a unit of analysis within which a single situation is responded to with one "instance" of coping. Only within this smallest meaningful unit of analysis can the relationship between situational and individual variables and the type of coping response be most directly explored.

The reports were put into categories by subjects instructed to subjectively sort the written reports into any number of different kinds of stress (Behling et al., 1980). While the category structures are of interest in their own right, they were used here to ensure that only widely experienced situations were included as stimuli. The episode reports used here were selected to provide a wide range of controllability and severity values, enabling tests of those situation variables.

Control

Definitions of control appearing in the literature are somewhat confusing since researchers apparently select different aspects of the stimulus-response-outcome sequence for study. Figure 2 summarizes this confusion by providing definitions of control at various points along this sequence.
Stimulus situation

An individual may have control over whether or not a situation ever occurs, or he may be able to change the composition of environmental elements forming the stimulus situation (Lacey, 1979).

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A stimulus situation is more or less subject to influence by the actions of a particular individual (Gatchel, 1980; deCharms, 1979).

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Perception of the situation

An individual may possess cognitive control over the interpretation of the stimulus situation (Averill, 1973).

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Decision to act

Given the stimulus situation as interpreted, an individual may have behavioral alternatives presumably, though not necessarily, linked to different outcomes (Lacey, 1979; Steiner, 1979; Averill, 1973).

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Behavior response

Averill (1973) distinguishes between decisional control—being able to select from alternative responses—and behavioral control, which is being able to respond so as to influence outcomes.

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Figure 2. Definitions of Control
Whether effected by stimulus selection, perceptual process, or exercise of choice, the essential feature of control is the potential for influencing the outcomes of behavioral situations. But control is a feature of the relationship between an individual and his environment. To emphasize that control implies manipulation of the objective situation, or elements of the objective situation, in its linkage with outcomes is, therefore, important.

Control, then, is defined as influence over behavioral situation outcomes, effected by manipulation of the objective situation. Influence may be thought of as altering the probability of occurrence of an outcome or as altering the composition of the outcome by voluntary action (Lacey, 1979). Objectively, situations vary in the degree to which they may be manipulated; this property is termed controllability. Subjectively, individuals vary in their beliefs regarding possession and use of such influence.

Control as a Situation Property

Certain objective features of a situation may render it subject to the influence of persons involved. In other cases, situations are not amenable to control and outcomes are essentially predetermined and unavoidable. The existence of a contingency between performance of a behavior and the occurrence or nonoccurrence of an outcome has been labeled controllability (Gatchel, 1980).

In stress episode research the interest in controllability is somewhat narrow. The emphasis lies with outcomes serving to reduce or eliminate the factors producing stress. Here, a situation is controllable to the extent that individuals are potentially able to remove or
alter the source of stress; in the language of coping, controllability refers to the potential effectiveness of objective coping responses. Thus, we are dealing with objective probabilities of particular outcomes resulting from individual coping attempts.

Significantly, controllability does not vary linearly with changes in these objective probabilities. The term uncontrollability is applied to situations where response-outcome independence exists. Studies of helplessness reveal that probabilities remaining consistently near .5 describe uncontrollable situations (Seligman, 1975). The chances of a given response leading to an anticipated outcome are just equal to the chances of not achieving the outcome. These situations can be particularly stressful. Departures from a probability of near .5 render the situation less uncontrollable.

Control as an Individual Property

One element of individual belief systems or personality is the tendency to perceive the possession of control. Not dependent on the particular stimulus situation at hand, this perception constitutes a generalized expectancy (Rotter, 1966). Rotter has classified people as internals and externals based on their beliefs regarding the source of control over personal response-outcome contingencies. Internals believe they are the source of control, while externals believe the locus of control exists elsewhere.

Belief about locus of control is one part of an individual's belief system, a part that may be described as a component of an attitude. Besides this cognitive component regarding the locus of control, individuals have varying degrees of preference for possession of control.
Differences in the desire for control (Burger and Arkin, 1980; Burger and Cooper, 1979) reflect the importance individuals attach to having control in general.

Along with cognitive and evaluative components, an individual's attitude toward control includes the degree of predisposition to respond. General anxiety, or trait anxiety, measures this aspect of control (Spielberger, Gorsuch and Lushene, 1970).

As an attitude control is distinct from the experience of being in control, which is termed personal causation (deCharms, 1979). Experiencing control, according to deCharms, is a trainable skill not related to changes in belief systems. Such training and experience is reportedly not correlated with changes in locus of control (deCharms, 1979).

Anderson (1977) reported, however, that internals experiencing successful control in catastrophic situations showed a tendency to become more internal, while unsuccessful externals became more external.

Summary

"... a major task for any analysis of coping is to provide a means by which the multifaceted situational and dispositional variables can be conceptualized" (Lazarus et al., 1974, p. 269).

The main variable of interest in this study was coping behavior as a response to stressful job situations. Both the situational and the individual dispositional variable sets hypothesized to be related to variability in responses contain one or more variables of control. The variable sets are classified and presented in Figure 3.
<table>
<thead>
<tr>
<th>Individual variables</th>
<th>Response</th>
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<tbody>
<tr>
<td>Dispositional</td>
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<tr>
<td>Internal/External Locus of Control</td>
<td>Objective-oriented Coping</td>
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<tr>
<td>Desirability of Control</td>
<td>Subjective-oriented Coping</td>
</tr>
<tr>
<td>General (trait) Anxiety</td>
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<table>
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<th>Situational variables</th>
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<td>Controllability</td>
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<td>Severity</td>
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Figure 3. Variables Used in this Study
Chapter 3

CONTROL

Introduction

The purpose of this chapter is to discuss the literature on control that seems relevant to an investigation of control as a determinant of coping response to stress. It was earlier stated that the variables of control have not been systematically investigated in relation to coping responses. Nevertheless, the concept of control applied to individual behavior—purposeful and emotional responding—has been widely researched.

Pertinent findings from this research are summarized following an attempt to clarify the concept of control. Three themes found in the literature are employed to organize the presentation: the perception of control, control and psychological responding, and the importance of control to the individual. While not independent, these themes each support the introduction of variables of control into an analysis of coping response determinants.

Clarification of the Concept of Control

Although a certain amount of confusion regarding the definition of control arises when studies are compared, most investigations fall into one or the other of two categories. Some address the issue of choice behavior or influence over the elements leading to choices. For example,
consider the choice between a chocolate or strawberry ice cream cone. The issue here is strictly one of decision. Either ice cream cone may lead to the same degree of satisfaction. The existence of control in terms of choice has nothing to do with the eventual outcome.

The other definition of control addressed in research investigations may be termed outcome control. The existence of a contingency between the act of securing an ice cream cone and the occurrence of the final outcome—satisfaction—and the voluntary nature of the act implies control over the outcome. It is not a simple task to completely unravel these two facets of control. For purposes of this study, control is interpreted in terms of influence over outcomes because the dependent variable, coping response, is viewed here as the outcome of an individual-situation interaction.

Interestingly, there is some evidence to suggest that perceived control is more sensitive to outcomes than to the existence of choice. Steiner (1970) reports that subjects worked harder to gain a choice when the options were less equal in desirability (unequal outcomes). The subjects perceived less control in such cases, however. The perception of control is higher if one likes the chocolate cone just as much as the strawberry cone (Rodin, Rennert and Solomon, 1980).

Research on stress has followed the outcome-control definition. Gatchel (1980) defined control as influence on the contingency between performance of behavior and the ability to avoid or escape an unpleasant event. Averill (1973), while acknowledging three forms of control, employed the term in connection with alleviating the effects of stressors. He noted that the contingency relationship depends on the situation as well as the person.
Perception of Control

Perceiving the existence of control is poorly understood, but most writers focus on the outcome-control definition of control. Jenkins and Ward (1965) concluded that individuals do not possess an accurate concept of contingency enabling realistic perceptions of control. In one study, the subjects' ratings of the degree of experienced control were significantly correlated only with frequency of reward (Abramson and Alloy, 1980). And the frequency of reward measure included both response-outcome and no response-no outcome pairings.

Abramson and Alloy (1980) report alternative explanations of the source of control perceptions. A motivational basis for such a perception suggests that reduction of anxiety or maintenance of self-esteem serves as the stimulus. Depressed subjects (low motivation for self-esteem preservation) were more accurate in assessing actual degree of control, in one study (Alloy and Abramson, 1979). Presumably they were not as motivated to perceive control.

A cognitive basis for perception of control is interpreted to suggest an intuitive theory of control. This theory may be described in terms of a rule of sufficiency. If action A leads to outcome B, control is experienced; the occurrence of action A is sufficient for the occurrence of outcome B. No attempt is made to determine if A is necessary for the occurrence of B. Outcomes which are merely predictable are experienced as controllable (Gatchel, 1980).

Control and Psychological Responding

There is some evidence to warrant associating reduction of control with negative emotional responding in aversive situations (Gatchel,
1980; Lazarus, 1966). Conversely, the stimulation of perceived control plays a central role in anxiety reduction through such processes as systematic desensitization (Seligman, 1975). It is premature to hypothesize that perception of control functions as a switching mechanism between emotional and behavioral responding, but the intuitive leap is not excessive.

Houston (1972), in an effort to replicate and extend Lazarus' earlier findings, found no difference in reported anxiety between internals and externals (locus of control) in a no-control (stressful) condition. Reported anxiety was relatively high compared to the control (nonstress) condition. The internals, however, exhibited a marked increase in physiological arousal, presumably signalling a "take charge" response. The externals "resigned" themselves to the threat, showing essentially no change in arousal. Thus, while some evidence exists to demonstrate individual differences in responding to control conditions, it is not clear to what extent those differences are reflected in behavior directed toward alleviating the condition of felt stress.

The Importance of Control

Whether individuals seem motivated more by internal drive or by external goals, the behavior resulting from a motivated state involves discrimination among alternative means and ends. One must assume, therefore, that individuals are interested in securing an alignment or appropriate relationship between whatever motivates and the behavior/outcome that results from the motivated state. Such an interest implies that the importance of control is axiomatic.
White (1959) underscores the general importance of the control issue in his discussion of competence. People are simply, biologically, motivated to manipulate their environment. Other writers support this assertion. Allen and Greenberger (1980) interpreted acts of destruction as "last resort" efforts to exercise personal control when alternative, more appropriate, outlets have been closed. A general tendency to incorrectly perceive the existence of control is a much replicated finding (Abramson and Alloy, 1980).

Recently, this argument has been challenged and this challenge serves as an important stimulus for the hypotheses in the present study. Rodin et al. (1980) reported that subjects were interested in the opportunity to manipulate their environment--gain control over choices--only when the manipulations were associated with increased chances of obtaining a more desirable outcome. Therefore, there seemed to be no intrinsic need to control. Assuming that stress is, or at some level of intensity becomes, an undesirable outcome, individuals are interested in whatever choice behaviors they perceive to be contingently related to reduction of stress. Behavior in reaction to the occurrence of stress would, therefore, depend on (1) an individual's propensity to perceive control, (2) the interpretation of the particular situation at hand, and (3) what behavioral choices are identified as contingently related to the reduction of stress.

As a group, managers are expected to attach more importance to personal control compared with non-managers. Allen and Greenberger (1980) suggested that their data indicates the motivation to restore (lost) control is stronger for individuals having relatively high,
stable levels of control. This is important if unsuccessful efforts to eliminate stress represents, for those persons, loss of control. Possibly related to this finding is the discovery that subjects in more-control conditions of several experiments reported lower levels of self-esteem. Puzzled by this relationship, Rodin et al. (1980) eventually found that experienced responsibility for the outcome, induced by perception of control, was the intervening variable. When subjects were supplied with more information about the actual behavior-outcome contingencies involved, self esteem did not differ from no-control subject groups. Since managers are routinely made to feel responsible for their actions, it is expected that they would be more sensitive to incremental changes in the perception of control.
Chapter 4

THE RESEARCH PROBLEM

Purpose of this Study

This investigation was designed to accomplish two things: first, to employ a cognitively oriented approach to stress research (Wilson, 1980; Lacey, 1979), and second, to address the question of individual and situational differences in the selection of coping responses. Can a cognitive approach to stress research, involving manipulations of third person episode reports, yield information regarding the processing of responses to stress? Cognitive approaches are useful because they allow uniform sets of stimuli to be responded to in a controlled manner, using manipulations of standardized instruments. A number of carefully selected stressful situations are needed in order to adequately explore the range of the variables, and this can be done in a reasonable amount of time only by using short descriptions of actual stress situations.

A second reason for preferring a cognitive approach was to avoid a serious confound involved with the use of actual stress situations in laboratory procedures or simulations. Arousal level interacts with coping response in such a way as to make assessment of severity of stress and type of coping response difficult (Soloman, Holmes and
McCaul, 1980). The amount of effort an individual uses in responding to a particular situation contaminates the measurement of both cognitive assessment and coping response.

The use of stress episode reports does involve two limitations, however. First, subjects must "project" themselves into situations using minimal information about the essential elements of the person-environment interaction. That each situation is interpreted in the same way and that such "standard" interpretations necessarily represent meaningful events become unavoidable assumptions. A second, more important, limitation involves the accuracy of the reports. Would subjects interpret and respond to the real event in the same way they say they will? Sidle, Moos, Adams and Cady (1969) supported an affirmative answer by addressing this issue in terms of a confound between social desirability and coping response measure. Though the approach is less than perfect, the use of episode reports can add an important dimension to research on stress (Behling et al., 1980).

The primary emphasis of this study involved research on the factors determining the selection of coping responses. What individual dispositional variables are related to the number and variety of coping responses within acute stress episodes? Do individual difference variables explain more or less of the variance in coping response than situation variables? Only preliminary studies in this area have been reported in the literature since, apparently, individual differences have only recently begun to receive attention in coping research (Roskies and Lazarus, 1980; Folkman and Lazarus, 1980; Soloman et al., 1980; Burger and Akin, 1980; deCharms, 1979). Specifically, no reports
of individual consistency or situation consistency in producing coping responses were found in the literature (Folkman and Lazarus, 1980, p. 221).

Research Questions

This study involved questions in four areas associated with individual responses to job stress. The possibility of reconceptualizing job stress as a result of findings in these four areas represented a fifth area of inquiry. Initially, the relationships among the variables within each of the three variable sets were studied. These sets are: (1) individual dispositional variables, (2) situation variables, and (3) individual response variables (see Figure 4). Then, relationships among the variable sets were investigated in an attempt to explain the variability found in coping responses. Finally, dependent on the earlier results, the most meaningful way of conceptualizing job stress in terms of these variables was explored.

Attempts to explain the relationship of stress and coping to the variables of control are not evident in the literature on stress and control. Researchers and managers searching for effective stress reduction interventions in the workplace could be significantly aided by explanations of the relative importance of individual and situational control factors relative to job stress. Evidence exists that control variables are related to cognitive, emotional, and behavioral responses (Seligman, 1975). This study proposed to cast these responses into a framework of stress and coping and to explore control within job stress episodes.
Figure 4. Acute Stress Episode Showing the Role of Individual Predisposition Variables
Relationships Among Individual Variables

Three individual variables are potentially related to selection of coping responses in job stress episodes: internal-external locus of control, desirability of (desire for) control, and general (trait) anxiety. Intercorrelations among the three were prerequisite to establishing the extent to which the set of variables explains the variance in coping response. Of interest to research on control is the relationship between each variable of control and the other two measures.

Situation Variables

Two issues concerning the variable controllability were explored in a preliminary data analysis. The claim that this variable represents a situation property depends on interjudgmental agreement in the assessment of controllability within the job stress episodes. Each episode was rated as to the probability that individual attempts to influence outcomes would be successful. Low reliability in this assessment would have jeopardized the construct validity of controllability and might have signalled the operation of some important individual difference variable among the judges. In this study, situation variables must not be confounded with individual variables in the attempt to partition variation in coping response.

The second issue involves the relationship between controllability and severity. High intercorrelation here could have prohibited using both variables simultaneously in an analysis. There is no necessary relationship between these two variables.
Individual Response Variables

Although two types of coping responses generally are accepted to exist, little is known empirically about differentiation in their use. One question addressed here regards the mixture of coping responses: Does an individual typically respond to a stressful job situation by a single mode of coping or by a combination of objective- and subjective-oriented coping responses? Perhaps some situations or some individuals call for single modes and some for mixed modes.

Variability in Coping Response

The central question aimed at discovering the roles of individual and situational variables in explaining differences in coping response. This issue was pursued as a problem of partitioning the variance of coping as a dependent variable.

Figure 4 illustrates the acute stress episode, showing the role of the individual predisposition variables. Alternative labels for the factors in the model are included for clarity.

Figure 5 shows the acute stress episode in terms of those variables measured in this study.

Summarizing, the three specific research questions were: (1) Are separate objective and subjective coping response modes identifiable in the distribution of coping responses to stress? (2) What are the relationships among the individual predisposition variables, the perceived situation variables, and the individual response variables? and (3) Is coping mode determined primarily by the individual or by the situation?
Figure 5. Acute Stress Episode Showing the Variables Used in this Study

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<thead>
<tr>
<th>Uncontrollable Situation</th>
<th>Controllable Situation</th>
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<tbody>
<tr>
<td>Unworkable/</td>
<td>Workable/</td>
</tr>
<tr>
<td>Inappropriate</td>
<td>Appropriate</td>
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<table>
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<tr>
<th>Objective Coping Response</th>
<th>Uncontrollable Situation</th>
<th>Controllable Situation</th>
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<tbody>
<tr>
<td>Inappropriate</td>
<td>Appropriate</td>
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<tr>
<th>Subjective Coping Response</th>
<th>Uncontrollable Situation</th>
<th>Controllable Situation</th>
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<tbody>
<tr>
<td>Inappropriate</td>
<td>Appropriate</td>
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Figure 6. Situation-Response Matches (Adapted from Behling and Holcombe, 1981)
Reconceptualization of Job Stress

The development of knowledge about job stress and stress reduction techniques depends on understanding the interaction between persons experiencing stress and the situations they face. Behling and Holcombe (1981) hypothesized that certain combinations of situations and coping responses may be regarded as workable or appropriate, meaning stress reduction or avoidance is possible, while other combinations are unworkable or inappropriate. In this study, these combinations are represented in Figure 6. If it is determined that situation variables explain most of the variance in coping response, then job stress may be viewed as a problem of mismatch between situation properties and coping response. Skillful reading of the situation so that the proper response can be selected would be the goal of stress reduction techniques.

If individual variables explain most of the variance in coping response, then job stress is a mismatch between the person and the situation. One example of this sort of result is illustrated in Figure 7.

<table>
<thead>
<tr>
<th></th>
<th>Uncontrollable Situation</th>
<th>Controllable Situation</th>
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<tbody>
<tr>
<td>Internal</td>
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<td>Congruent</td>
</tr>
<tr>
<td>External</td>
<td>Congruent</td>
<td>Incongruent</td>
</tr>
</tbody>
</table>

Figure 7. Individual-Situation Matches

Persons in the incongruent cells, assuming that the nature of being external or internal is carried over to the type of coping response, would
typify the mismatch. Stress reduction could emphasize the development of coping response alternatives, in contrast to the dominant response evidenced by this kind of result.

Hypotheses

Coping Response Mode

H 1: The ratio of objective to subjective coping responses (adjusted for number of items) serves as an indicator of coping response mode. The distribution of this ratio will be bimodal, indicating the presence of two distinct coping modes.

Relationships Among Independent and Dependent Variables

H 2 A1: Externality will have a negative direct effect on perceived controllability.

H 2 A2: Desirability of control will have a positive direct effect on perceived controllability.

H 2 A3: General anxiety will have a positive direct effect on perceived severity.

H 2 B1: Perceived severity will have a positive direct effect on number of subjective coping responses.

H 2 B2: Perceived severity will have a positive direct effect on number of objective coping responses.

H 2 B3: Perceived controllability will have a positive direct effect on number of objective coping responses.

H 2 B4: Perceived controllability will have a negative direct effect on number of subjective coping responses.
H 2 C1: Externality will have a negative direct effect on number
of objective coping responses.

H 2 C2: Externality will have a positive direct effect on number
of subjective coping responses.

H 2 C3: Desirability of control will have a positive direct ef-
fect on number of objective coping responses.

H 2 C4: Desirability of control will have a negative direct ef-
fect on number of subjective coping responses.

H 2 C5: General anxiety will have a positive direct effect on the
number of objective coping responses.

H 2 C6: General anxiety will have a positive direct effect on the
number of subjective coping responses.

Determination of Coping Response Ratio (Mode)

H 3: Individual predisposition variables will have a larger total
effect on individual response ratio than perceived situation
characteristics will have.
Chapter 5

METHOD AND MEASUREMENT

Overview

A standard set of acute stress episode reports, developed from the reports collected in an earlier study (Behling et al., 1980) were used as stimuli in this study. Subjects were asked to respond to a report as if it described a situation they faced. Subjects also completed questionnaires that collected individual dispositional data.

Acute Stress Episode Reports

Preliminary manipulations of the stress episode reports were designed to (1) assign controllability ratings to the reports, and (2) assign severity ratings. Expert judges were asked to rate the episode reports on the basis of the likelihood individuals could influence or determine outcomes associated with reduction or elimination of stress. The judges were then asked to rate the reports on the significance or importance of the situation described (Appendix A).

Nine episode reports, each with a small variance in severity and controllability rating, selected to span the range of each variable, form the stimulus set. This set was used to elicit individual coping response data. The nine-episode set may be described in terms of the $3 \times 3$ matrix of situational independent variables appearing in Figure 8.
One hundred stress episode reports were submitted to six "expert judges." The reports consisted of forty-one items classified as "Time pressure or deadlines" and fifty-nine items classified as "Job itself and/or the boss's behavior," obtained from earlier research (Behling et al., 1980). These two classifications represent the most frequently reported types of stressful situations. The expert judges were management faculty members associated with the author.

Interjudgmental agreement, using a criterion of four out of six (two-thirds), assigned forty-three of the episode reports to the cells of Figure 8. The number of reports assigned to each cell is depicted in Figure 9. A chi-square test of independence failed, as expected, to find a significant relationship between the two variables (chi-square calculated value of 3.18, df = 4, p .50). This is taken as a preliminary indication of independence between the two variables. A correlation coefficient calculated from subjects' severity and controllability ratings of the situations is later used in an attempt to confirm this.

Of those items available for each cell, selection of a stimulus item was made on the basis of clarity, readability, and low ambiguity. Foremost was the requirement for low ambiguity so that subjects would
interpret the situations uniformly. Evidence of success in meeting this requirement are the low standard deviations of severity and controllability in the data. On seven-point Likert scales, the standard deviation of controllability measures only 1.23 scale points, while the standard deviation of severity measures 1.57 scale points. The within-cell range was 0.9 to 1.9 scale points. The actual items used, referred to as situation descriptions in communicating with subjects, are presented as Table 1.

Sample

One hundred eighty questionnaire packages (twenty per severity x controllability cell) were distributed to volunteer subjects, most of whom were either filling a managerial position at the time of the study or had done so in the recent past. One hundred fifty-seven (87.2%) were returned. About two-thirds of the subjects were MBA students who were permitted to complete the questionnaires during class time. Others were full-time managers and their associates in the Huntington, West Virginia, area; most are personal acquaintances of the author or of

<table>
<thead>
<tr>
<th></th>
<th>High Severity</th>
<th>Moderate Severity</th>
<th>Low Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Controllability</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Moderate Controllability</td>
<td>4</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Low Controllability</td>
<td>3</td>
<td>7</td>
<td>10</td>
</tr>
</tbody>
</table>

Figure 9. Results of Expert Judge Sort
Table 1: Stress Episode Reports Used as Stimuli in this Study

**Low Severity, Low Controllability**

"After being part time for about six months, you lost your single office to a new full time person. You now have to share an office."

**Low Severity, Moderate Controllability**

"You recently took a job as a managerial assistant. You started your job and for a number of days were given little if any direction or guidance as to what things you are expected to do."

**Low Severity, High Controllability**

"You were asked to show someone your job and technique as a technical specialist. You were anxious, not because you were worried about being replaced, but because you felt self-conscious the first few times you had to do this."

**Moderate Severity, Low Controllability**

"When your first performance review came up you were rated, overall, 3 on a scale of 5 which is perceived as average despite wording that indicated 'adequate'. The evaluation was based on performance on the phase of your job description which you did not know was weighted so significantly. All other performance was rated excellent but it did not affect overall rating."

**Moderate Severity, Moderate Controllability**

"'Circumstances' are forcing you to actively participate in a project planning meeting with employees of a customer. You have only been on the job two weeks and are working in a field in which you have no training."

**Moderate Severity, High Controllability**

"You experience anxiety in a public speaking engagement involving a lecture to a group of 40-50 freshman students regarding services offered by your agency, a campus student service. You had to answer questions regarding agency policy, including defending the need for what was viewed as 'bureaucratic red tape'."
Table 1 (continued)

**High Severity, Low Controllability**

"Higher management has initiated a certain program. You are the junior engineer told to 'run with it', but you are not given proper authority or 'leverage'. The program crosses functional areas and interacts a lot with higher management. You have encountered obstacles due to conflicting interests of different departments. All your boss offers is the standard 'I'll take it up with my boss' answer, with no results."

**High Severity, Moderate Controllability**

"You have many project reports to complete for different users. Information and materials are not available for timely completion. You are behind in your work and users are calling you and asking for results."

**High Severity, High Controllability**

"You are involved in intense work on a long term project and are trying to meet deadlines that will determine your continued employment."
other faculty members in the author's department of residence. A similar sample was used in collecting the stress episode reports (Behling et al., 1980).

This convenience sample may be characterized as heterogeneous, ranging from men and women with minimal experience to company presidents. Subjects' ages ranged from approximately twenty-five to fifty-five. Marlowe-Crowne Social Desirability scale mean and standard deviation are 15.82 and 6.17, respectively, falling within national norms of 10.06-16.27 for the mean and just outside a range of 3.46-6.16 for the standard deviation (Crowne and Marlowe, 1964).

Variable Measurement

Individual Dispositional Variables

Three measures were completed for each subject. Locus of control was measured by Rotter's revised 23-item questionnaire (Rotter, 1966; Lefcourt, 1976), which includes six "filler" items for a total of 29 subject responses. The questionnaire is entitled "Social Reaction Inventory" (Appendix B). Subjects select the alternative in each item they believe to be more true. The score consists of a count of responses identified as the external alternatives, ranging from 0 to 23. Results are integer values of the variable externality. Researchers have also treated the measure as a qualitative variable, identifying internals and externals by dividing scores at the median or at the first and third quartiles (Lefcourt, 1976). This widely used instrument has undergone many reliability studies and consistently measures from .48 to .84 (test-retest, internal consistency, and other methods).
It has demonstrated convergent validity with other measures of locus of control and discriminates well from intelligence measures and social desirability (Rotter, 1966; Joe, 1971).

Anxiety was measured by the trait scale of the State-Trait Anxiety Inventory (Spielberger et al., 1970). Subjects were asked to describe the way they "generally feel" in a 20-item "A-trait" listing, called the "Self-Evaluation Questionnaire" (Appendix C). Responses to each of the 20 items are scored from 1 to 4, indicating low to high anxiety, respectively, for the item. The scale ranges from a low of 20 to a high of 80. Spielberger et al. (1970) reported successful reliability and validity studies: test-retest reliability of .73 to .86, alpha coefficients of .86 to .92, high correlations with other measures of trait anxiety, and discrimination from many personality variables.

Desire for control was measured by the Desirability of Control (DC) scale, presented to subjects as the "Preference Survey" (Burger and Arkin, 1980; Burger and Cooper, 1979). The scale requires subjects to indicate the extent to which they agree with items describing a high or low desire to control 20 general and 20 specific situations on seven-point scales (Appendix D). The scale for all forty items ranges from 20 (low) to 140 (high). Burger and Cooper (1979) reported a test-retest reliability value of .75 and a Kuder-Richardson 20 value of .80. Their validity studies revealed weak correlations—good discriminant validity—with locus of control (.19) and social desirability (.11); they interpreted other studies in support of convergent validity.

Along with the individual dispositional measures, the Marlowe-Crowne Social Desirability scale (Crowne and Marlowe, 1964) was
administered as a measure of social desirability response set. The scale (Appendix G), given the title "Personal Attitudes and Traits Survey," is commonly used in assessing experimenter expectancy threats to validity. The scale has been found to be reliable: .88 test-retest and Kuder-Richardson 20 values; it has exhibited good discrimination from MMPI scales (Crowne and Marlowe, 1964). Range of the scale is from 0 (low) to 33 (high).

Individual Response Variables

Coping responses to job stress episodes were evaluated using the Ways of Coping checklist (Folkman and Lazarus, 1980). For this study it was entitled "Managerial Situation-Response Questionnaire," because the stress episode (stimulus) situation was attached. The checklist (Appendix E) consists of 68 possible coping responses. Subjects respond yes or no to each, indicating whether or not they would use that coping response in reacting to the particular situation confronting them. The checklist contains two scales: a 24-item P-scale, measuring the number of problem-focused coping responses (here termed objective coping responses) and a 40-item E-scale, measuring the number of emotion-focused coping responses (subjective coping). Four filler items are not counted. The scores range from 0 to 24 and from 0 to 40, respectively. Results include the number of each kind of coping response, total number of responses, and ratios of the number of each kind of response to the total number of each kind of response available. The ratios are used to determine the predominant mode of coping response. Folkman and Lazarus (1980) reported that internal consistency studies of the checklist support a claim of reliability; evaluation by
an interdisciplinary group of judges and alpha values of .80 for the P-scale and .81 for the E-scale. Discriminant validity between the scales was supported by a factor analytic study.

Situational Variables

A 69th item and a 70th item were added to the Ways of Coping checklist to measure the subject’s perception of controllability and severity. These items are seven-point Likert scales on which subjects indicate the extent to which a situation is controllable, i.e., something that could be changed or that must be accepted and the extent of severity of the situation, i.e., importance or significance. The episode description was attached to the front page of the Ways of Coping checklist.

Procedure

The set of reports was developed by having expert judges rank-order sample episode reports on the basis of controllability and severity involved. Episodes representing a range of controllability and severity ratings were used as stimuli in collecting individual response data from the subjects. To insure that the stressful situations depicted in the reports were representative of frequently encountered situations, the reports were selected from those stress categories most frequently encountered (Behling et al., 1980). This procedure was necessary to insure that subjects were able to respond to the stimuli on the basis of “experience”.

Each subject was presented with a stimulus consisting of a single episode report. He or she was asked to consider the situation as if
it had just happened to him/her. Then, based on experience in similar situations, s/he was asked to complete the Ways of Coping checklist, indicating those responses s/he would make or has made in such circumstances. Individual predisposition data was collected from each subject; half the subjects responded immediately before being presented with the stimulus and Ways of Coping checklist, half responded immediately after indicating their responses to the stimulus. All subjects completed the three disposition data instruments: locus of control, desirability of control, and general anxiety. The stimulus and scales were packaged with a cover letter (Appendix F) for distribution. The unit was then self-administered by subjects, either in class or in private—-at home or office.

Data Description

First Hypothesis

The data used to test the first hypothesis set consisted of a frequency distribution of values of obtained coping response ratio.

Second Hypothesis

Data used to test the direct effects among the variables were to be the path coefficients between each pair of variables as specified in the path diagram (Figure 10). Since there are six variables—three individual, two situational, and one response—there are fifteen correlation coefficients (fifteen combinations of five items taken two at a time). From these correlation coefficients, eleven path
coefficients were to be estimated (Duncan, 1975; Nie, Hull, Jenkins, Steinbrenner and Bent, 1975). Figure 11 lists the fifteen correlation coefficients and the eleven path coefficients.

For hypothesis two, the path diagram was to be evaluated twice. Subjective coping response and objective coping response were to be evaluated separately as the dependent variable. Only a subset of the path coefficients presented in Figure 11 were to be used to test the hypotheses in set 2. Path coefficients not subject to test in set 2 should nevertheless have been insignificant or at least less significant than those hypothesized to be significant, in order to maximize the validity of the model.

Under certain conditions, correlation coefficients were to be used in place of path coefficients, namely, where indirect effects were not significant.
<table>
<thead>
<tr>
<th>Correlation Coefficients</th>
<th>Path Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>$r_{IE,DC}$</td>
<td>$p_{IE,CON}$</td>
</tr>
<tr>
<td>$r_{IE,ANX}$</td>
<td>$p_{IE,SEV}$</td>
</tr>
<tr>
<td>$r_{DC,ANX}$</td>
<td>$p_{DC,CON}$</td>
</tr>
<tr>
<td>$r_{IE,CON}$</td>
<td>$p_{DC,SEV}$</td>
</tr>
<tr>
<td>$r_{IE,SEV}$</td>
<td>$p_{ANX,CON}$</td>
</tr>
<tr>
<td>$r_{DC,CON}$</td>
<td>$p_{ANX,SEV}$</td>
</tr>
<tr>
<td>$r_{DC,SEV}$</td>
<td></td>
</tr>
<tr>
<td>$r_{ANX,CON}$</td>
<td></td>
</tr>
<tr>
<td>$r_{ANX,SEV}$</td>
<td></td>
</tr>
<tr>
<td>$r_{CON,SEV}$</td>
<td></td>
</tr>
<tr>
<td>$r_{IE,COPE}$</td>
<td>$p_{IE,COPE}$</td>
</tr>
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<td>$r_{DC,COPE}$</td>
<td>$p_{DC,COPE}$</td>
</tr>
<tr>
<td>$r_{ANX,COPE}$</td>
<td>$p_{ANX,COPE}$</td>
</tr>
<tr>
<td>$r_{SEV,COPE}$</td>
<td>$p_{SEV,COPE}$</td>
</tr>
<tr>
<td>$r_{CON,COPE}$</td>
<td>$p_{CON,COPE}$</td>
</tr>
</tbody>
</table>

IE = externality score
DC = desirability of control score
ANX = trait anxiety score
CON = controllability score
SEV = severity score
COPE = number of objective or subjective coping responses

Figure 11. Correlation and Path Coefficients

Third Hypothesis

Data used to test the relative explanatory power of individual and situational variables on coping response mode were the $R^2$ "contributions" from each set of variables. In this case, coping response ratio was to be used as the dependent variable, and the fifteen correlation coefficients were to be recalculated.
Planned Analyses

First Hypothesis

The hypothesis concerns the extent to which there is a tendency toward one or the other modes. A bimodal distribution of coping response ratio would support this assertion. Coping response ratio \((\text{number of objective coping responses} + 24) + (\text{number of subjective coping responses} + 40)\) is an indicator of coping response mode. When the ratio is greater than 1.0, an objective coping response mode is indicated, by definition. When less than 1.0, a subjective coping response mode is indicated.

Second Hypothesis

A set of hypotheses concerns the interrelationships among the independent variables and the dependent variables. Path analysis was to be used to analyze the direct effects between the individual predisposition variables and the perceived situation variables, between the perceived situation variables and the individual response variables, and between the individual predisposition variables and the individual response variables (see Figure 10). Correlation analysis was to be used in the event of insignificant indirect effects.

Third Hypothesis

Hypothesis 3 concerns the relative effect of individual predisposition versus the perceived situation variables on coping responses. The procedure used in testing it depended on the outcome of tests of hypothesis 2. If hypothesis 2 \(A_1, A_2\) and \(A_3\) were not supported, a
multiple regression analysis for each set of independent variables to
determine which set explains a larger amount of the variance of coping
response would have been appropriate.

If hypothesis 2A were supported in whole or in part, then a com-
plexion arises. Individual predisposition variables would have an
indirect, as well as a direct, effect on the dependent variables. Com-
parisons of path analytic coefficients (Figure 10) would have been used
to test hypothesis 3.

Analysis of the Determinants of Perceived Situation Characteristics

According to the model (Figures 4 and 5) two factors determine per-
ceived situation characteristics. This study investigated only the
effect of individual predisposition variables on the perceived situa-
tion. Since the individual variables used here represent only a subset
of all individual difference variables, further analysis would have
been necessary in the event no relationships were found. Specifically,
comparisons between measurements of perceived situation characteristics
furnished by the subjects and obtained from the expert judges could
have been analyzed.

Case 1: Hypothesis 2 A1, A2 and A3 not confirmed. If the sub-
jects and the expert judges agree on situation measurements, then it is
safe to conclude that the situation characteristics are perceived accura-
tely. Disagreement would indicate that unmeasured individual vari-
able play a part in determining perception of the situation.

Case 2: Hypothesis 2 A1, A2 and A3 confirmed. Disagreement be-
tween subjects and judges strengthens the argument that the individual
variables chosen form an important subset.
In the effort to discover which independent variable set is the greater influence on coping response mode, a complication arises. The relationship between the sets of independent variables, arrow A in Figure 12, if significant, precludes a simple comparison of the $R^2$ values of separate regressions on each variable set. In such a case, path analysis was to be employed so that the indirect effect of the individual variables set on coping response mode is considered. In this way, $R^2$ contributions generated from the appropriate path coefficients may be compared. In the event that the relationship between the sets of independent variables is not significant (hypotheses II A not confirmed), a simple comparison of regression $R^2$ values, or correlation coefficients, is then made possible.

![Figure 12. Relationship of Variable Sets](image)
Chapter 6

RESULTS

Summary Statistics

Table 2 reports the means and standard deviations of all measured variables.

Table 2: Means and Standard Deviations of Measured Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Scale Ranges:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Min.</td>
</tr>
<tr>
<td>Social desirability</td>
<td>15.82</td>
<td>6.17</td>
<td>0</td>
</tr>
<tr>
<td>Desirability of control</td>
<td>108.44</td>
<td>9.99</td>
<td>20</td>
</tr>
<tr>
<td>General (trait) anxiety</td>
<td>34.79</td>
<td>8.11</td>
<td>20</td>
</tr>
<tr>
<td>Externality (locus of control)</td>
<td>9.66</td>
<td>4.49</td>
<td>0</td>
</tr>
<tr>
<td>Controllability</td>
<td>5.20</td>
<td>1.23</td>
<td>1</td>
</tr>
<tr>
<td>Severity</td>
<td>4.91</td>
<td>1.57</td>
<td>1</td>
</tr>
<tr>
<td>Objective coping response</td>
<td>16.63</td>
<td>3.77</td>
<td>0</td>
</tr>
<tr>
<td>Subjective coping response</td>
<td>18.85</td>
<td>6.18</td>
<td>0</td>
</tr>
<tr>
<td>Coping response ratio</td>
<td>1.62</td>
<td>0.65</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 3 reports the Pearson correlation coefficients among all measured variables. Significance levels are indicated as if pairwise correlations were independent, which they are not. Interpretations from the correlation matrix involve up to six correlations in an
Table 3: Pearson correlation coefficients among measured variables; correlation significance level.

<table>
<thead>
<tr>
<th>Social desirability (MC)</th>
<th>DC</th>
<th>ANX</th>
<th>IE</th>
<th>CON</th>
<th>SEV</th>
<th>PCOPE</th>
<th>ECOPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desirability of control (DC)</td>
<td>0.016</td>
<td>.8149</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General anxiety (ANX)</td>
<td>-.343**</td>
<td>-.258**</td>
<td>.0011</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Externality (IE)</td>
<td>-.365**</td>
<td>-.218**</td>
<td>.0060</td>
<td>.0001</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Controllability (CON)</td>
<td>.060</td>
<td>.212**</td>
<td>.050</td>
<td>-.134</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severity (SEV)</td>
<td>.184*</td>
<td>.021</td>
<td>.027</td>
<td>.013</td>
<td>.143</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objective coping response (PCOPE)</td>
<td>.088</td>
<td>.094</td>
<td>-.009</td>
<td>.054</td>
<td>.163*</td>
<td>.290**</td>
<td></td>
</tr>
<tr>
<td>Subjective coping response (ECOPE)</td>
<td>-.323**</td>
<td>.019</td>
<td>.331**</td>
<td>.337**</td>
<td>-.008</td>
<td>.054</td>
<td>.455**</td>
</tr>
<tr>
<td>Coping response ratio (COPE)</td>
<td>.336**</td>
<td>.042</td>
<td>-.364**</td>
<td>-.332**</td>
<td>.139</td>
<td>.113</td>
<td>.186*</td>
</tr>
</tbody>
</table>

** indicates p < .01; * indicates p < .05. The latter correlations are marginal or insignificant when family confidence coefficients are considered.
interdependent set. In such a case, significance levels would have to be set at .992 to obtain a family confidence coefficient of .95. Because only two correlations in the matrix are affected by this correction, objective coping response with controllability and social desirability with severity, recomputations of family confidence coefficients were not made for every statistical test and interpretation. Care was taken, however, to point out the effects of such corrections in the case of the two correlations mentioned above.

Preliminaries to Data Analysis

Measurement of Situation Variables

It was expected that subjects would rate situations in concordance with the expert judges: situations high and low in severity and controllability would be similarly rated. A comparison between the ratings of subjects and expert judges is complicated by the use of different rating scales for each group. The expert judges were given a three point scale for the purpose of identifying a wide range of variable levels. A seven point scale was provided to the subjects to allow better measurement of response variability. Ratings of subjects and those of the expert judges may be compared by computing subject ratings within each of the nine cells. Subjects ratings of controllability and severity were averaged for each cell. The nine means for each variable were then standardized, using a Z-transformation, so that comparisons could easily be made. The mean of cell means, used for the transformation, was 5.18 for controllability and 4.90 for severity. Standard deviation of cell means was 0.35 and 0.80, respectively. The standardized
means are presented in Figure 13; the values for controllability are upper right within each cell. Marginal values, which are standardized means across all three levels of the other variable in each case, are included in the figure.

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Moderate</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>-1.93</td>
<td>0.92</td>
<td>0.35</td>
</tr>
<tr>
<td>Moderate</td>
<td>-1.51</td>
<td>1.02</td>
<td>-1.33</td>
</tr>
<tr>
<td>Maximum</td>
<td>-0.68</td>
<td>0.07</td>
<td>0.07</td>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Moderate</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>-0.12</td>
<td>0.18</td>
<td>-0.76</td>
</tr>
<tr>
<td>Moderate</td>
<td>-0.86</td>
<td>0.35</td>
<td>1.72</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.60</td>
<td>-0.03</td>
<td>1.71</td>
</tr>
</tbody>
</table>

Controllability values are upper right, severity values are lower left, within each cell.

Figure 13: Standardized controllability and severity means for each stimulus cell.

As seen in the figure, only moderate agreement between the expert judges and the subjects is demonstrated. An ad hoc measurement of concordance between the ratings of the two groups, similar to Kendall's tau statistic, was used to measure the comparison. In the case of each variable, three minimum levels were compared in magnitude with all moderate and maximum levels of the same variable: $3 \times 6 = 18$ comparisons. In addition, each of three moderate levels was compared in magnitude with all three maximum levels of the same variable: $3 \times 3 = 9$ more comparisons. The percentage of the 27 total comparisons which were in
agreement with the expert judges—maximum > moderate > minimum—indicated the degree to which subject ratings correlated with expert judge ratings. For controllability, the measure is 22 of 27, or 81.5%; for severity, 20 of 27 comparisons fell in the expected direction, or 74.1%.

Such a result provides a reasonable basis for arguing in favor of perceptual accuracy on the part of subjects. Fortunately, such a position is not prerequisite to an interpretation of findings in this research. None of the individual variables is simultaneously related to both one or more situational variables and one or more response variables, which would have necessitated an unraveling of direct and indirect effects.

Except for desirability of control, which is correlated with controllability, determinants of situation variable ratings remain unidentified. Presumably, the nature of the objective situation is the major factor in such determinations.

Marlowe-Crowne Social Desirability Scale

Due to the possibility of interpretation problems arising from subject-expert judge disagreement in the event of significant individual variable-situation variable correlations, the Social Desirability Scale (Crowne and Marlowe, 1964) was included with the questionnaires (Appendix G). As it turned out, no such interpretation problem occurred.

It was found, however, that the Marlowe-Crowne SD scores are significantly correlated with externality (locus of control), anxiety, severity, and subjective (emotion-focused) coping response. As explained later, this would be expected if the scale is interpreted to
measure need for approval. The primary threat of such correlations is that they are indicators of experimenter-expectancy response bias. The question is: Did some subjects (those with large Social Desirability scores) furnish presumed experimenter-expected responses to some or all questionnaire items? This threat was eliminated by the following procedure. The sample was split at the mean of Social Desirability scores, forming two sample sets of n = 82 and n = 75. All correlations were recalculated to see if high levels of need for approval disproportionately affected the correlations among the three related variables, externality, anxiety, and ECOPE. Both samples yielded identical patterns of significant and nonsignificant correlations. It may be assumed, following the lead of Crowne and Marlowe (1964), that the scale was measuring latent need for approval.

Inferential Statistics

Cursory inspection of the obtained correlation coefficients (Table 3) in view of the path analytic scheme presented in Chapter 5 (Figures 9 and 11) reveals none of the hypothesized indirect effects. Therefore, path analysis, involving analysis of direct and indirect effects, was unnecessary. Correlation analyses were employed to test hypotheses and specify findings.

In general, two variable clusters were identified: one involving the individual predispositional variables and subjective (emotion-focused) coping response, the other involving situation variables and objective (problem-focused) coping response.
Hypothesis Test Results

H 1: Coping Response Mode

A unimodal distribution was found, failing to support the existence of separate coping modes. Figure 14 is a frequency plot of coping response ratio, defined as adjusted objective coping score divided by adjusted subjective coping score. The adjustments consist of dividing each score by the number of scale items associated with that score so that a ratio of one would mean an equal proportion of objective and subjective responses. The obtained ratio values clearly show a unimodal distribution with most of the scores greater than 1.0. The obtained mean is 1.62.

Figure 14: Frequency Plot of Coping Response Ratio
H 2: Relationships Among Independent and Dependent Variables

Figure 15 lists the hypotheses under the H 2 grouping, the test statistic, and the significance level. The pattern of findings is summarized in the next section.

H 3: Determination of Coping Response Ratio (Mode)

Two variables correlate significantly with coping response ratio: externality and anxiety. The reason for this finding is as follows. Externality and anxiety are related only to the denominator of coping response ratio, explaining 11.4% and 10.9% of the variance of the subjective coping measure, respectively. Controllability and severity, related to the numerator of the ratio, explain only 1.7% and 8.4% of the variance of objective coping response. Thus the stronger relationship achieves significance while the weaker one does not. The problem with interpreting coping response ratio precludes further meaningful analysis.

Summary of Findings

Figure 16 summarizes the relationships found among the variables measured in this study. Bidirectional arrows indicate significant correlations.

From this pattern of findings, and reasonable assumptions about cause-and-effect relationships, an interpretation of individual and situational determinants of coping response is possible. Two fundamental assumptions are required. First, individual dispositional variables are presumed antecedents of measured response variables; this assumption
H 2 A1  \( r_{IE,CON} \)  -.134  .0953  n.s.
H 2 A2  \( r_{DC,CON} \)  .212  .0077  **
H 2 A3  \( r_{ANX,SEV} \)  .027  .7393  n.s.
H 2 B1  \( r_{SEV,ECOPE} \)  .054  .5048  n.s.
H 2 B2  \( r_{SEV,PCOPE} \)  .290  .0002  **
H 2 B3  \( r_{CON,PCOPE} \)  .163  .0411  *
H 2 B4  \( r_{CON,ECOPE} \)  -.008  .9221  n.s.
H 2 C1  \( r_{IE,PCOPE} \)  .054  .5000  n.s.
H 2 C2  \( r_{IE,ECOPE} \)  .337  .0001  **
H 2 C3  \( r_{DC,PCOPE} \)  .094  .2401  n.s.
H 2 C4  \( r_{DC,ECOPE} \)  .019  .8151  n.s.
H 2 C5  \( r_{ANX,PCOPE} \)  -.009  .9062  n.s.
H 2 C6  \( r_{ANX,ECOPE} \)  .331  .0001  **

IE = externality score
DC = desirability of control score
ANX = trait anxiety score
CON = controllability score
SEV = severity score
ECOPE = subjective coping response score
PCOPE = objective coping response score

** significant at .01 level
* significant at .05 level
n.s. not significant

Figure 15: Hypothesis H 2 Results
follows a tradition from psychological research, which posits that personality variables are relatively stable constructs. Second, somewhat less tenable, is the assumption that situation variables as measured are determinants of coping response variables. The situation variable scale responses were included at the end of the coping response instrument, so no evidence directly supporting the assumption was found in the present data. The assumption is theoretically based.

Figure 17 shows the inferred relationships based on the observed correlations and theoretical assumptions. Directional arrows indicate presumed cause-and-effect relationships. Bidirectional arrows indicate only significant association. Due to the problems with interpreting coping response ratio, discussed later, it is omitted from the figure.
The three individual variables are interrelated. Controllability and severity, the situation variables, are properly regarded as perceived situation characteristics measurements. The inference here is that perceived situation characteristics determine the likelihood of objective (problem-focused) coping responses. The relationship is positive, so, more specifically, the likelihood of objective coping responses increases in situations perceived higher in controllability and/or higher in severity.

Externality and anxiety are positively associated with subjective (emotion-focused) coping response. The inference is that individuals who are more external in beliefs about control locus and who demonstrate a higher level of general anxiety are more likely to respond with subjective coping responses. The association between the two coping response measures is addressed later, as is the conclusion regarding desirability of control.
Chapter 7

DISCUSSION

Overview

Three major findings emerge from an analysis of the data. Findings involving coping response mode, a situation factor-objective coping response variable cluster, and an individual factor-subjective coping response variable cluster are discussed in separate sections below.

Three additional research issues are then discussed. Specifically, we first deal with how stress can most fruitfully be conceptualized, particularly in view of the need to find productive ways to understand and methods to deal with job stress. Next, the results of the present study are interpreted in support of the use of a cognitive approach in stress and coping research. Finally, we summarize findings regarding the variables of control.

Nonidentification of Coping Modes

It was hypothesized that individuals would emphasize one or the other of the two fundamental coping response tendencies. Some individuals would react to situations primarily by self-adjustment (or individuals would react to some situations primarily by self-adjustment),
while others would employ efforts aimed at changing the situation (or individuals would employ such efforts in some situations). This is clearly not the case.

As already shown (Figure 14), the distribution of the ratio of objective-to-subjective coping responses is unimodal. Also, most values of the ratio exceed 1.0. These findings mean that subjects were more predisposed toward indicating the use of objective coping responses, but, more importantly, that one type of coping response was not consistently selected in favor of the alternative type of response. Thus the suggestion of an "either-or" coping response mode is not supported. This does not contradict the literature, which identifies the two types of responses but does not specify the degree to which individuals will employ either or both responses across a range of situations. Folkman and Lazarus (1980) reported findings similar to those reported here: a positive relationship between problem-focused and emotion-focused coping, with 93% of their subjects indicating both types of responses, and no clear pattern of relative proportions in the employment of either or both responses.

This implies that individuals employ both types of coping reactions in response to stressful situations. More seriously, a threat to construct validity is suggested: Does the Ways of Coping checklist adequately discriminate between the two coping response types? Folkman and Lazarus (1980) report using five procedures to evaluate the internal consistency of the two subscales: E-scale—emotion-focused coping—and P-scale—problem-focused coping. While their results support a claim of internal consistency, which is necessary for construct
validity, consistent significant correlations between the subscales (near .44—19% common variance) provoke a question of discriminant validity. Fortunately, the pattern of correlations between the subscales and the individual and situation variables obtained in the present study makes a positive contribution to the validity assessment of the Ways of Coping checklist. That each subscale correlates meaningfully with a different set of variables hypothesized as determinants of coping response serves as a datum for such a claim.

The existence of a correlation between the two coping response types may, of course, suggest a meaningful interrelation between the two constructs. This possibility is addressed later within the discussion on conceptualization of job stress (beginning on page 69).

Correlates of Objective Coping Response

Results support the argument that each of the two coping response types is determined by a different set of variables. Results of the thirteen hypotheses in the H 2 set form an unambiguous pattern: two individual predispositional variables are correlated with the likelihood of subjective (emotion-focused) coping response and the two situation variables are correlated with the likelihood of objective (problem-focused) coping response. Among these six variables there is not a single significant correlation which violates the pattern.

Together, severity and controllability explain 9.9% of the variance in objective coping response (Appendix H), but severity is the more important of the two ($r^2$ of 8.4 versus 2.7 for controllability in separate regressions). Desirability of (desire for) control is positively correlated with controllability (.212), but is not related to
either response measure. Psychological theory and logic suggests that desire for control determines, or helps to determine, the likelihood of interpreting situations as being more controllable.

This evidence suggests that the likelihood of using objective (problem-focused) coping responses increases when: (1) the situation is perceived as relatively important or significant, or (2) the resolution or outcome of the situation is perceived to be subject to the manager's influence. The latter perception is related to the extent to which the person, in general, desires control or believes the possession of control to be important. Individuals attempt to reduce stress by dealing with the objective situation in cases where the situation is important or significant, or is recognized as amenable to being dealt with, or both.

While severity was operationalized in terms of importance or significance, one possible problem in interpretation arises since it was not made clear where the locus of significance lies. Is the situation important to the manager or to the organization? Is the construct unidimensional? Despite more complete instructions to the expert judges (Appendix A), and some degree of subject-expert judge agreement in situation ratings, some ambiguity remains.

Two correlations involving situational variables need further comment in view of their significance level. First, the correlation between Social Desirability (MC) and severity, observed at a significance level of .0210, is insignificant when properly regarded as one of a family of correlations associated with the social desirability
variable. The required level for significance would be .007. The insignificance of this correlation facilitates the interpretability of Social Desirability scale results, addressed in the next section and elsewhere (see Chapter 6).

The other correlation in question is between controllability and objective coping response. At a significance level of $p < .0411$, this correlation becomes marginal when viewed as one of two correlations tying the situational variables to objective coping response. Indeed, when objective coping response was regressed on both situational variables at once, the regression coefficient for controllability failed to reach significance ($p < .1095$). In view of this, the language including controllability as a correlate of objective coping response is amended to read "tentatively included," due to the marginal significance of the obtained correlations.

Correlates of Subjective Coping Response

Anxiety and externality, together, explain $16.5\%$ of the variance of subjective coping response (Appendix H). Social desirability, interpreted as need for approval, is significantly negatively correlated with subjective coping response. The suggestion is that the likelihood of using subjective (emotion-focused) coping responses is greater in individuals with the following interrelated cluster of characteristics: more external in beliefs about the locus of control, higher level of general (trait) anxiety, and lower level of need for approval. These individuals, regardless of the situation they find themselves in, respond by increasing self-oriented behavior.
It is clear that coping responses do not fall on a continuum from self-oriented to situation-oriented. Instead, two nonorthogonal dimensions of coping behavior more adequately depict individual responses to stress. If this finding can be confirmed, then more sense can be made of the ways individuals behave in various situations, individual differences in orientation to stressful situations can be more meaningfully researched, and stress-reduction techniques may be expanded to incorporate both situational and individual dimensions.

**Conceptualization of Job Stress**

A study of the things individuals do in response to problematic job situations can be helpful in drawing inferences about what is happening in the course of the person-environment interaction. The discovery of two dimensions of coping responses stimulates a consideration of how such response units interact. The whole idea of stress as person-environment mismatch may be cast in a new light.

The strong association between the likelihood of objective and subjective coping response \( r = .455 \) encountered in this study may mean there are unmeasured individual variables related to both situation and coping response variables. Another view is that the relationship obtains from the pattern of responses when individual and situational variables are simultaneously considered. An interaction between individual and situational variables produces four cases. Figure 18 depicts why objective and subjective coping responses might show a significant correlation (severity and controllability are shown as if they vary together; the measured correlation is \( .143, p < .0745 \)).
Conventional measures of stress are probably sensitive only to subjective (emotion-focused) coping responses. It is conceivable, however, that the two coping response types are mutually causal. That is, once either is activated, the other becomes manifest (it may also be that the domains overlap or that the data collection instrument exhibits weak convergent and discriminant validity). If that is the case, measures of physiological arousal or psychological stress would indirectly respond to levels of objective coping response.

Interestingly, Figure 18 shows that stress may not result from person-situation or situation-person mismatches. In general, individuals do not attempt to change the stressful situation (objective or problem-focused coping) when it is not controllable. If it is controllable, they do make such attempts. Too, regardless of situation characteristics, individuals high in anxiety and believers in an external locus of control make efforts to adapt themselves to their immediate circumstances (subjective or emotion-focused coping). Those individuals with the opposite set of characteristics presumably feel adapted already or do not consider the option.

| High Severity | High Objective and Subjective Coping Score | High Objective, Low Subjective Coping Score |
| High Controlability | | |
| Low Severity | Low Objective, High Subjective Coping Score | Low Objective, Low Subjective Coping Score |

<table>
<thead>
<tr>
<th>High E x ternality</th>
<th>Low E x ternality</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Anxiety</td>
<td>Low Anxiety</td>
</tr>
</tbody>
</table>

| Low Severity | Low Objective, Low Subjective Coping Score |
| Low Controlability | | |

Figure 18: Coping Response Patterns
It must be emphasized that such a conclusion is subject to serious limitations in terms of generalizability. The sample here consisted of managers and upwardly-mobile ex-managers who had experience in successfully coping with a variety of situations. Even so, the relationships illustrated in Figure 18, based on obtained correlations, might be even stronger if the degree of felt stress were used as a moderator. Individuals with high levels of stress may be uniformly exhibiting response patterns contrary to those depicted in the figure. Thus, high levels of felt stress could still signal mismatch between person and situation. The four potential mismatches are:

1. objective coping response (attempts to control) in low controllability situations,
2. lack of objective coping response in high controllability situations,
3. subjective coping response (self-adjustment) where anxiety is low and situation control is believed,
4. lack of subjective coping response (no adjustment) where anxiety is high and belief of personal control is low.

Coaching individuals to know themselves and their response tendencies plus to be able to read and respond appropriately to the particular situation at hand may be the best strategy in helping them cope with stress. Certainly other variables need to be investigated in connection with such a prescription. Among the most significant
of these are likely to be coronary-prone behavior pattern, measures of felt stress, and degree of experienced situation responsibility.

**Cognitive Approach**

One always hesitates to assert that people will do what they say they will do, particularly if the behavior in question can be identified as socially desirable or undesirable. Research involving responses to cognitive manipulations must therefore present a pattern of findings which minimizes alternative interpretations. It is maintained that this study accomplished this successfully.

First, separate clusters of interacting variables were identified. The significance and nonsignificance of variable relationships forming the obtained pattern would be difficult to attribute to any single influence variable operating across all measurements. Second, each subject responded to only a single situation, eliminating within-subjects bias in differentiating responses to different situations. If anything, this fact would make the obtained correlations more difficult to produce, since individuals with like characteristics had to respond similarly to obtain any correlation at all.

Of course, the suggestion of construct validity is not enough. Once a pattern of findings has been teased out from a set of representative responses, confirmation is required, particularly through multiple operationalizations of the constructs. The advantage of the cognitive approach, in addition to avoiding a confound with physiological responding as discussed earlier, is the ability to simultaneously operationalize several different constructs while employing stimulus controls. Single stress situations were "held in the subjects' minds" while a
number of variables were measured. The results then suggest where to look when the more cumbersome, and often less reliable, methods are mobilized to increase the weight of evidence.

The Variables of Control

An argument was made earlier that the three individual predispositional variables, anxiety, locus of control, and desirability of (desire for) control, interact as facets of an attitude of, or toward, control. Results of this study only partly support such a claim. Since all three variables are significantly interrelated, there is basically one individual dimension involved. Some individuals exhibited high externality, high anxiety, and low desire for control. Others exhibited low externality, low anxiety, and high desire for control.

Of the three variables, externality and desirability of control seemed to operate as expected. Externals perceive a low capacity to influence; the positive relationship with subjective coping response indicates a turn toward the self in coping with the situation. The lack of a negative relationship between externality and desirability of control, which might be expected following the same logic, only reinforces the finding of a complete lack of interaction between the two sets of response determinants.

Anxiety turned out not to assume the previously attributed relevance to the concept of control. Anxiety clearly does not measure predisposition to take action involving influence or control attempts. From the results reported in this study, anxiety seems to indicate a propensity to respond to stress through subjective coping. It is
interesting that severity assumes the role expected of anxiety, and
that the two variables are not correlated. Perhaps state anxiety (the
variable measured here is trait anxiety), which may be theoretically
closer to arousal, would be properly cast in the role of a component of
attitude toward control.

Specific Recommendations for Further Research

Several avenues of productive research were identified by this
study. Additional individual and situational variable domains need to
be sampled to more fully specify the determinants of coping response.
Stress measures should be incorporated in coping research to more fully
identify the switching mechanism that governs types of responses to
stress in various circumstances and associated with various individual
characteristics.

Of more immediate relevance to the contributions made here are
(1) broadening the sample to include people "unsuccessful" or "less
successful" in their efforts to cope with stress, and (2) developing
and incorporating additional coping measures to increase construct val-
idity of the claims regarding different types of coping responses. In
spite of the voluminous literature, cited earlier, which supports the
existence of two coping response types, well-developed measures are not
yet available.
Chapter 8

SUMMARY

Stress and Coping

Stress is essentially a cognitively-determined mismatch between perceived demands, threats, or opportunities associated with a particular situation and an individual's capability of being successful in meeting the requirements of the situation. A model of stress, called the acute stress episode model, was used to show the way individual and behavioral situation components interact to produce stress and coping responses to stress. Coping refers to physiological, psychological, and behavioral reactions to stress; the universal motive of such reactions is assumed to be stress reduction or elimination.

Two types of coping responses are repeatedly identified in the literature: responses aimed at changing the situational factors which produced the stressful condition and responses which serve to adjust the individual to the situation. The former was termed objective coping response, referring to the target of the response within the acute stress episode model, or problem-focused coping. The latter was termed subjective coping response, again pointing to the response target, or emotion-focused coping.

Despite considerable agreement regarding the existence of two types of coping responses, the degree to which individuals employ one or both types in some or all situations has apparently not been
researched, except for a single, recent study (Folkman and Lazarus, 1980). The present study represents an attempt to research this issue within job stress situations, while seeking evidence of the factors determining the use of one or both coping response types.

**Purpose**

This study encompassed five objectives:

1. to employ a cognitive approach in studying a range of factors hypothesized to be associated with coping responses to stress,
2. to determine whether individuals would indicate that they respond to stressful situations by employing a single type of coping response,
3. to measure the relationships among selected individual variables, situation variables, and coping response measures,
4. to investigate the importance of control in relation to the determinants of coping response to stress, and
5. to draw inferences about the nature of the person-environment interaction that results in job stress.

**Sample and Measures**

One hundred fifty-seven managers and MBA students with managerial experience in, and around, the Huntington, West Virginia area participated in the study. The individual trait measures were Rotter's revised locus of control questionnaire, the desirability of control scale, the trait scale of the State-Trait Anxiety Inventory, and the Marlowe-Crowne social desirability scale. Single seven-point Likert scales were used to measure two situation factors. Coping responses
were tallied from the Ways of Coping checklist, which includes sub-scales for problem-focused and emotion-focused coping.

Findings

The pattern of findings which emerged from the data provide mixed support for hypotheses derived from a synthesis of literature on control and on stress and coping. A cognitive approach permitted the use of standardized situations as stimuli in the collection of several individual measures. Individuals clearly did not indicate the use of a single type of coping response in stressful job situations. They use both types, more use of one type was associated with more use of the other type, and more objective responses than subjective responses were indicated.

Two individual variables, locus of control and anxiety, were found to be correlated with subjective (emotion-focused) coping response, and not with the situation variables or objective coping response. Social desirability was interpreted as latent need for approval, fitting in as a third determinant of subjective coping response. Controllability and severity, the situation variables, were correlated with objective coping response, and not with the individual variables or subjective coping response. Desirability of control was related with situation controllability, the other individual variables, but not with either response variable. The separation between the two sets of interacting variables was complete: no other significant correlations were found.

Variables associated with the control construct showed up on both sides of the pattern. Locus of control operated as hypothesized in
part. Externals tended to exhibit self-oriented coping responses, while internals were found only to exhibit less of those responses. Anxiety operated similarly, but was hypothesized (with negative results) to be related to the propensity to respond by using objectively oriented coping attempts. Desirability of control was only associated with the tendency to give higher controllability ratings.

Individuals who are external in locus of control belief and who indicate high levels of general anxiety tend to respond to stressful situations by self-adjustment, regardless of the nature of the situation. Individuals in relatively critical, controllable situations respond by trying to affect the situation. Both actions seem appropriate. It is therefore not clear where the degree of experienced stress fits in. Some individuals may not follow the pattern and, as a result, experience higher levels of stress. Another possibility is that one type of response to stress directly influences the other type, increasing arousal and affecting other measures of stress. More research is recommended to seek answers to these questions involving the nature of stress.
APPENDIX A

Instructions to Expert Judges
From: Doug Holcombe
To: Expert Judges

Thanks for agreeing to participate in this study. I am interested in the reaction of managers to certain kinds of work situations. I am asking you to give your opinion regarding some attributes of those situations.

You will be furnished with a set of cards. Each card contains the description of a stressful work situation provided by a manager asked to report a "real-life" experience. Two aspects of the situations are of interest. First, how much control could an individual exercise within such a situation?

Please sort the cards into 3 piles according to the extent an individual in such a situation could reasonably expect to determine or influence how the situation is resolved. "Influencibility" of situations ranges from a minimal probability of influencing outcomes to a maximal probability. The three controllability levels (3 piles) are interpreted more fully below:

1. Minimum: Subject cannot influence outcome or resolution of situation.
2. Moderate: Subject has as much chance to influence the outcome as not.
3. Maximum: Subject can readily influence outcome or resolution of situation.

Put any cards you cannot classify or that you find ambiguous or unclear into a 4th pile, labeled "no classification."

The second aspect of the situation is its relative importance or organizational significance. From the standpoint of the manager involved in each situation, please sort the cards into three piles indicating the "severity" or importance of the situation. The three levels are interpreted below:

1. Minimum: The situation is of minimal importance.
2. Moderate: The situation is of average importance.
3. Maximum: The situation is of extreme or near extreme importance.

Put any cards you cannot classify into a 4th pile, as before.

Thank you for your help.
APPENDIX B

Rotter's Revised Locus of Control Questionnaire
Social Reaction Inventory

This is a questionnaire to find out the way in which certain important events in our society affect different people. Each item consists of a pair of alternatives lettered a and b. Please select the one statement of each pair (and only one) which you more strongly believe to be the case as far as you're concerned. Be sure to select the one you actually believe to be more true rather than the one you think you should choose or the one you would like to be true. This is a measure of personal belief; obviously there are no right or wrong answers.

Your answer, either a or b to each question on this inventory, is to be reported beside the question.

Please answer these items carefully but do not spend too much time on any one item. Be sure to find an answer for every choice. For each numbered question make an X on the line beside either a or b, whichever you choose as the statement most true.

In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you're concerned. Also try to respond to each item independently when making your choice: do not be influenced by your previous choices.

Remember: Select that alternative which you personally believe to be more true.

I more strongly believe that:

1.____ a. Children get into trouble because their parents punish them too much.
   ____ b. The trouble with most children nowadays is that their parents are too easy with them.

2.____ a. Many of the unhappy things in people's lives are partly due to bad luck.
   ____ b. People's misfortunes result from the mistakes they make.

3.____ a. One of the major reasons why we have wars is because people don't take enough interest in politics.
   ____ b. There will always be wars, no matter how hard people try to prevent them.

4.____ a. In the long run people get the respect they deserve in this world.
   ____ b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

5.____ a. The idea that teachers are unfair to students is nonsense.
   ____ b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

GO ON TO THE NEXT PAGE
6. ___a. Without the right breaks one cannot be an effective leader.
   ___b. Capable people who fail to become leaders have not taken advantage of their opportunities.

7. ___a. No matter how hard you try some people just don't like you.
   ___b. People who can't get others to like them don't understand how to get along with others.

8. ___a. Heredity plays the major role in determining one's personality.
   ___b. It is one's experiences in life which determine what they're like.

9. ___a. I have often found that what is going to happen will happen.
   ___b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

10. ___a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
    ___b. Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. ___a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
    ___b. Getting a good job depends mainly on being in the right place at the right time.

12. ___a. The average citizen can have an influence in government decisions.
    ___b. This world is run by the few people in power, and there is not much the little guy can do about it.

13. ___a. When I make plans, I am almost certain that I can make them work.
    ___b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

14. ___a. There are certain people who are just no good.
    ___b. There is some good in everybody.

15. ___a. In my case getting what I want has little or nothing to do with luck.
    ___b. Many times we might just as well decide what to do by flipping a coin.
16. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
   b. Getting people to do the right thing depends upon ability; luck has little or nothing to do with it.

17. a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
   b. By taking an active part in political and social affairs the people can control world events.

18. a. Most people can't realize the extent to which their lives are controlled by accidental happenings.
   b. There really is no such thing as "luck".

19. a. One should always be willing to admit his mistakes.
   b. It is usually best to cover up one's mistakes.

20. a. It is hard to know whether or not a person really likes you.
   b. How many friends you have depends upon how nice a person you are.

21. a. In the long run the bad things that happen to us are balanced by the good ones.
   b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22. a. With enough effort we can wipe out political corruption.
   b. It is difficult for people to have much control over the things politicians do in office.

23. a. Sometimes I can't understand how teachers arrive at the grades they give.
   b. There is a direct connection between how hard I study and the grades I get.

24. a. A good leader expects people to decide for themselves what they should do.
   b. A good leader makes it clear to everybody what their jobs are.

25. a. Many times I feel that I have little influence over the things that happen to me.
   b. It is impossible for me to believe that chance or luck plays an important role in my life.

26. a. People are lonely because they don't try to be friendly.
   b. There's not much use in trying too hard to please people, if they like you, they like you.

GO ON TO THE NEXT PAGE
27.  
   a. There is too much emphasis on athletics in high school.
   b. Team sports are an excellent way to build character.

28.  
   a. What happens to me is my own doing.
   b. Sometimes I feel that I don't have enough control over the direction my life is taking.

29.  
   a. Most of the time I can't understand why politicians behave the way they do.
   b. In the long run the people are responsible for bad government on a national as well as on a local level.
APPENDIX C

State-Trait Anxiety Inventory
SELF-EVALUATION QUESTIONNAIRE
STAI FORM X-2

NAME_______________________________________________________DATE________

DIRECTIONS: A number of statements which people have
used to describe themselves are given below. Read each sta­
tement and then blacken in the appropriate circle to the right of
the statement to indicate how you generally feel. There are no
right or wrong answers. Do not spend too much time on any
one statement but give the answer which seems to describe
how you generally feel.

21. I feel pleasant ................................................................. © © © ©
22. I tire quickly ................................................................. © © © ©
23. I feel like crying ............................................................. © © © ©
24. I wish I could be as happy as others seem to be .............. © © © ©
25. I am losing out on things because I can’t make up my mind soon enough ... © © © ©
26. I feel rested ................................................................. © © © ©
27. I am “calm, cool, and collected” ...................................... © © © ©
28. I feel that difficulties are piling up so that I cannot overcome them ...... © © © ©
29. I worry too much over something that really doesn’t matter ......... © © © ©
30. I am happy ................................................................. © © © ©
31. I am inclined to take things hard ..................................... © © © ©
32. I lack self-confidence .................................................... © © © ©
33. I feel secure ................................................................. © © © ©
34. I try to avoid facing a crisis or difficulty ......................... © © © ©
35. I feel blue ................................................................. © © © ©
36. I am content .............................................................. © © © ©
37. Some unimportant thought runs through my mind and bothers me .... © © © ©
38. I take disappointments so keenly that I can’t put them out of my mind .... © © © ©
39. I am a steady person ..................................................... © © © ©
40. I get in a state of tension or turmoil as I think over my recent concerns and
interests ....................................................................................... © © © ©

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APPENDIX D

Desirability of Control Scale
**Preference Survey**

Below you will find a series of statements. Please read each statement carefully and respond to it by expressing the extent to which you believe the statement applies to you. For all items a response from 1 to 7 is required. Use the number that best reflects your belief when the scale is defined as follows:

1. The statement doesn't apply to me at all.
2. The statement usually doesn't apply to me.
3. Most often, the statement does not apply.
4. I am unsure about whether or not the statement applies to me, or it applies to me about half of the time.
5. The statement applies more often than not.
6. The statement usually applies to me.
7. The statement always applies to me.

It is important that you respond to all items.

1. I prefer a job where I have a lot of control over what I do and when I do it. [1 2 3 4 5 6 7]
2. I enjoy political participation because I want to have as much of a say in running government as possible. [1 2 3 4 5 6 7]
3. I try to avoid situations where someone else tells me what to do. [1 2 3 4 5 6 7]
4. I would prefer to be a leader than a follower. [1 2 3 4 5 6 7]
5. I enjoy being able to influence the actions of others. [1 2 3 4 5 6 7]
6. I am careful to check everything on an automobile before I leave for a long trip. [1 2 3 4 5 6 7]
7. Others usually know what is best for me. [1 2 3 4 5 6 7]
8. I enjoy making my own decisions. [1 2 3 4 5 6 7]
9. I enjoy having control over my own destiny. [1 2 3 4 5 6 7]
10. I would rather someone else take over the leadership role when I'm involved in a group project. [1 2 3 4 5 6 7]
1. Doesn't apply at all.
2. Usually doesn't apply.
3. Most often does not apply.
4. Unsure, or applies half the time.
5. Applies more often than not.
6. Usually applies.
7. Always applies.

11. I consider myself to be generally more capable of handling situations than others are.  
12. I'd rather run my own business and make my own mistakes than listen to someone else's orders.  
13. I like to get a good idea of what a job is all about before I begin.  
14. When I see a problem, I prefer to do something about it rather than sit by and let it continue.  
15. When it comes to orders, I would rather give them than receive them.  
16. I wish I could push many of life's daily decisions off on someone else.  
17. When driving, I try to avoid putting myself in a situation where I could be hurt by someone else's mistake.  
18. I prefer to avoid situations where someone else has to tell me what it is I should be doing.  
19. There are many situations in which I would prefer only one choice rather than having to make a decision.  
20. I like to wait and see if someone else is going to solve a problem so that I don't have to be bothered with it.
APPENDIX E

Ways of Coping Checklist
Managerial Situation--Response Questionnaire

Below is a description of an actual event or situation. Please read through this description several times, assuming that you are the manager involved. Assume that this situation has just occurred. Imagine what you personally would think, say, and do in response to the situation.

Following the situation description is a checklist of things people say and do in response to such situations. After you have taken a moment or two to mentally "put yourself in the situation," complete the checklist by putting a check in the "YES" or "NO" column for each item, depending on whether that item applies to you.

(see attached sheet for description)

YES NO

1. Just concentrated on what you had to do next -- the next step ..............................................................

2. You went over the problem again and again in your mind to try to understand it ...........................................

3. Turned to work or substitute activity to take your mind off things ..........................................................

4. You felt that time would make a difference, the only thing to do was to wait ............................................

5. Bargained or compromised to get something positive from the situation ..................................................

6. Did something which you thought wouldn't work, but at least you were doing something ..........................

7. Got the person responsible to change his or her mind ...

8. Talked to someone to find out more about the situation

9. Blamed yourself .....................................................

10. Concentrated on something good that could come out of the whole thing ............................................

11. Criticized or lectured yourself ..............................

12. Tried not to burn your bridges behind you, but leave things open somewhat .....................................

13. Hoped a miracle would happen ............................
14. Went along with fate; sometimes you just have bad luck

15. Went on as if nothing had happened

16. Felt bad that you couldn't avoid the problem

17. Kept your feelings to yourself

18. Looked for the "silver lining", so to speak; tried to look on the bright side of things

19. Slept more than usual

20. Got mad at the people or things that caused the problem

21. Accepted sympathy and understanding from someone

22. Told yourself things that helped you to feel better

23. You were inspired to do something creative

24. Tried to forget the whole thing

25. Got professional help and did what they recommended

26. Changed or grew as a person in a good way

27. Waited to see what would happen

28. Did something totally new that you never would have done if this hadn't happened

29. Tried to make up to someone for the bad thing that happened

30. Made a plan of action and followed it

31. Accepted the next best thing to what you wanted

32. Let your feelings out somehow

33. Realized you brought the problem on yourself

34. Came out of the experience better than when you went in

35. Talked to someone who could do something concrete about the problem

36. Got away from it for a while; tried to rest or take a vacation
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>37. Tried to make yourself feel better by eating, drinking, smoking, taking medication, etc.</td>
<td></td>
</tr>
<tr>
<td>38. Took a big chance or did something very risky</td>
<td></td>
</tr>
<tr>
<td>39. Found new faith or some important truth about life</td>
<td></td>
</tr>
<tr>
<td>40. Tried not to act too hastily or follow your first hunch</td>
<td></td>
</tr>
<tr>
<td>41. Joked about it</td>
<td></td>
</tr>
<tr>
<td>42. Maintained your pride and kept a stiff upper lip</td>
<td></td>
</tr>
<tr>
<td>43. Rediscovered what is important in life</td>
<td></td>
</tr>
<tr>
<td>44. Changed something so things would turn out all right</td>
<td></td>
</tr>
<tr>
<td>45. Avoided being with people in general</td>
<td></td>
</tr>
<tr>
<td>46. Didn't let it get to you; refused to think too much about it</td>
<td></td>
</tr>
<tr>
<td>47. Asked someone you respected for advice and followed it</td>
<td></td>
</tr>
<tr>
<td>48. Kept others from knowing how bad things were</td>
<td></td>
</tr>
<tr>
<td>49. Made light out of the situation; refused to get too serious about it</td>
<td></td>
</tr>
<tr>
<td>50. Talked to someone about how you were feeling</td>
<td></td>
</tr>
<tr>
<td>51. Stood your ground and fought for what you wanted</td>
<td></td>
</tr>
<tr>
<td>52. Took it out on other people</td>
<td></td>
</tr>
<tr>
<td>53. Drew on your past experiences; you were in a similar situation before</td>
<td></td>
</tr>
<tr>
<td>54. Just took things one step at a time</td>
<td></td>
</tr>
<tr>
<td>55. You knew what had to be done, so you doubled your efforts and tried harder to make things work</td>
<td></td>
</tr>
<tr>
<td>56. Refused to believe that it had happened</td>
<td></td>
</tr>
<tr>
<td>57. Made a promise to yourself that things would be different next time</td>
<td></td>
</tr>
<tr>
<td>58. Came up with a couple of different solutions to the problem</td>
<td></td>
</tr>
</tbody>
</table>
59. Accepted it, since nothing could be done
60. Wished you were a stronger person -- more optimistic and forceful
61. Accepted your strong feelings, but didn't let them interfere with other things too much
62. Wished that you could change what had happened
63. Wished that you could change the way you felt
64. Changed something about yourself so that you could deal with the situation better
65. Daydreamed or imagined a better time or place than the one you were in
66. Had fantasies or wishes about how things might turn out
67. Thought about fantastic or unreal things (like the perfect revenge or finding a million dollars) that made you feel better
68. Wished that the situation would go away or somehow be over with

Items 69 and 70 ask you to describe the nature of the situation you have just responded to; reread the situation to refresh your memory.

69. On the 7 point scale below, please indicate the extent to which you could reasonably expect to determine or influence how this situation is resolved. The left side of the scale means minimal or near 0% probability of influencing the outcome. The right side of the scale means maximum or near 100% probability of influencing the outcome. Put a check in the appropriate space.

<table>
<thead>
<tr>
<th>minimum influence, near 0%</th>
<th>moderate influence, near 50%</th>
<th>maximum influence, near 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Cannot influence outcome or resolution of situation.</td>
<td>As much chance to influence as not.</td>
<td>Can readily influence outcome or resolution of situation.</td>
</tr>
</tbody>
</table>
70. On the 7 point scale below, please indicate the importance or significance of the situation, relative to other situations a manager might find himself or herself involved in. Put a check in the appropriate space.

<table>
<thead>
<tr>
<th>Minimum Significance</th>
<th>Moderate Significance</th>
<th>Maximum Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Situation is of minimal importance.</td>
<td>Situation is of average importance.</td>
<td>Situation is of extreme importance.</td>
</tr>
</tbody>
</table>
APPENDIX F

Cover Letter to Subjects Participating in this Study
Dear Participant:

Thank you so much for agreeing to take part in this study. This survey consists of five quick-answer type questionnaires (not necessarily in the following order):

1. Self-evaluation questionnaire
2. Social reaction inventory
3. Preference survey
4. Personal attitudes and traits survey
5. Managerial situation-response questionnaire

Please complete each questionnaire in the order they appear in your packet. Answer each question as openly and honestly as possible. Read the instructions for each questionnaire carefully before beginning. Each questionnaire is separate from the others and requires a different kind of response. Do not spend too much time with any one item.

Please do not put your name on these forms. Your privacy as a participant in this study is guaranteed—you can be sure that your answers will never be used in any way that can be identified with you.

Make sure that you have responded to all items in each questionnaire (note that the Self-evaluation questionnaire is printed on both sides).

Thank you very much.

Sincerely,

F. Douglas Holcombe
Assistant Professor of Management
Marshall University
APPENDIX G

Social Desirability Scale
Personal Attitudes and Traits Survey

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true (T) or false (F) as it pertains to you personally. Please indicate your answer by circling the answer that fits your case. Please circle a response by each item.

1. Before voting I thoroughly investigate the qualifications of all the candidates.

2. I never hesitate to go out of my way to help someone in trouble.

3. It is sometimes hard for me to go on with my work if I am not encouraged.

4. I have never intensely disliked anyone.

5. On occasion I have had doubts about my ability to succeed in life.

6. I sometimes feel resentful when I don't get my way.

7. I am always careful about my manner of dress.

8. My table manners at home are as good as when I eat out in a restaurant.

9. If I could get into a movie without paying for it and be sure I was not seen, I would probably do it.

10. On a few occasions, I have given up doing something because I thought too little of my ability.

11. I like to gossip at times.

12. There have been times when I felt like rebelling against people in authority even though I knew they were right.

13. No matter who I'm talking to, I'm always a good listener.

14. I can remember "playing sick" to get out of something.

15. There have been occasions when I took advantage of someone.

16. I'm always willing to admit it when I make a mistake.

17. I always try to practice what I preach.
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>T</td>
<td>F</td>
<td>18. I don't find it particularly difficult to get along with loudmouthed, obnoxious people.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>19. I sometimes try to get even, rather than forgive and forget.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>20. When I don't know something I don't at all mind admitting it.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>21. I am always courteous, even to people who are disagreeable.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>22. At times I have really insisted on having things my own way.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>23. There have been occasions when I felt like smashing things.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>24. I would never think of letting someone else be punished for my wrongdoings.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>25. I never resent being asked to return a favor.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>26. I have never been irked when people expressed ideas very different from my own.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>27. I never make a long trip without checking the safety of my car.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>28. There have been times when I was quite jealous of the good fortune of others.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>29. I have almost never felt the urge to tell someone off.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>30. I am sometimes irritated by people who ask favors of me.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>31. I have never felt that I was punished without cause.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>32. I sometimes think when people have a misfortune they only got what they deserved.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>33. I have never deliberately said something that hurt someone's feelings.</td>
</tr>
</tbody>
</table>
APPENDIX H

Multiple Regressions Used in the Analysis of the Determinants of
Objective and Subjective Coping Responses
1. Regression of objective (problem-focused) coping response (PCOPE) on controllability (CON) and severity (SEV).

   Model: PCOPE = CON, SEV
   Estimate: PCOPE = 11.4327 + 0.3813 CON + 0.6544 SEV
   (significance of estimated parameter) (.0001) (.1095) (.0006)

   Model statistics: F = 8.48, p < .0003; R^2 = .099

2. Regression of subjective (emotion-focused) coping response (ECOPE) on externality (IE) and anxiety (ANX).

   Model: ECOPE = IE, ANX
   Estimate: ECOPE = 9.017 + 0.3472 IE + 0.1848 ANX
   (significance of estimated parameter) (.0001) (.0016) (.0024)

   Model statistics: F = 15.25, p < .0001; R^2 = .165
LIST OF REFERENCES


